ANNEX 5

PRTR GUIDANCE MANUAL

CONSOLIDATING THE ENVIRONMENTAL MONITORING SYSTEM IN ALBANIA

A project funded by the European Union and managed by the Delegation of the European Commission to Albania

PRTR GUIDANCE MANUAL

CEMSA Project

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DISCLAIMER

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ABBREVIATIONS

CAS	Chemical Abstracts Service
CEMS	Continuous Emission Monitoring System
CEN	Comité Européen de Normalisation (European Committee for Standardisation)
CRM	Certified Reference Materials
CORINAIR	Core Inventory of Air Emissions
EEA	European Environment Agency
EMAS	Eco-Management and Audit Scheme
EMEP	Co-operative programme for monitoring and evaluation of the long range transmission of air pollutants in Europe
EN	European Norm
EPER	European Pollutant Emission Register
E-PRTR	European Pollutant Release and Transfer Register
IMPEL	European Network for the Implementation and Enforcement of Environmental Law
IPCC	Intergovernmental Panel on Climate Change
IPPC	Integrated Pollution Prevention and Control
ISO	International Organization for Standardization
ISO 14001	The International Standard for Environmental management systems – Requirements with guidance for use, 2004
MoEFWA	Ministry of Environment, Forestry and Water Administration
NACE-code	Code according to Commission Regulation 29/2002/EC of 19 December 2001 amending Council Regulation (EEC) No 3037/90 on the statistical classification of economic activities in the European Community
NEA	National Environmental Agency
PEM	Predictive Emission Monitoring
REA	Regional Environmental Agency
UNECE	United Nations Economic Commission for Europe
US EPA	Environmental Protection Agency (U.S.A.)

EXECUTIVE SUMMARY

The Draft Decision on PRTR – hereafter referred to as the Decision - concerns the implementation of pollutant release and transfer register in the Republic of Albania.

The Decision is in line with the EC Regulation 166/2006 of the European Parliament and of the Council (hereafter referred to as the 'E-PRTR Regulation') concerning the establishment of a European Pollutant Release and Transfer Register and amending Council Directives 91/689/EEC and 96/61/EC" implementing at the EU level the UNECE PRTR (or Kiev) protocol.

The present document provides guidance on the various reporting processes to be followed for PRTR reporting as set out in the Decision.

The Decision aims to enhance public access to environmental information in the form of a publicly accessible electronic database. The establishment of a coherent and integrated PRTR at the State level will thereby contribute to the prevention and reduction of pollution, by delivering data for policy makers and facilitating public participation in environmental decision-making. It will give the public, industry, scientists, insurance companies, local authorities, non-governmental organisations and other decision-makers a solid database for comparisons and future decisions in environmental matters.

The Decision includes specific information on releases of pollutants to air, water and land and off-site transfers of waste and of pollutants in wastewater. Those data have to be reported by operators of facilities carrying out specific activities.

THE PRTR REPORTING OBLIGATIONS AS PRESCRIBED IN THE DECISION AND DETAILED IN THE PRESENT DOCUMENT DO NOT REPLACE AND/OR REPEAL THE OTHER REPORTING OBLIGATIONS SUCH AS THOSE INDICATED IN THE ENVIRONMENTAL PERMIT DELIVERED BY THE COMPETENT AUTHORITIES.

Article 29 of the Decision provides that "*The detailed instruments and methodologies for the proper implementation of the PRTR shall be endorsed by the Minister and shall include:*

- *reporting procedures;*
- *monitoring procedures;*
- *the data to be reported;*
- *quality assurance and assessment;*

indication of type of withheld data and reasons why they were withheld in the case of confidential data;

reference to internationally approved release determination and analytical methods and sampling methodologies;

coding of activities according to Annex I to this Deciison."

In accordance with the provisions of the PRTR Decision, facility operators to whom the Decision applies have to report specific data to the competent authority(ies) i.e. the NEA. The NEA transmits those data to the MoEFWA and other frontline Ministries and also has the obligation to make them publicly accessible in an electronic database and to forward them to the EU/EEA.

The present document provides instructions on the various reporting processes as set out in the PRTR Decision. A first chapter is dedicated to the overall structure and to the related organisational aspects of the scheme set up for implementing the PRTR Decision. The present document is divided into three parts:

Generalities and background information: definition of terms, PRTR scope and implementing scheme.

Questionnaire: this part describes of the obligations to be followed by the facilities in reporting.

Additional supporting information is provided in Appendixes.

The competent authorities may review, and where necessary amend this guidance document and the associated appendices.

Remark

The term "Annex" is used for the annexes of the Decision while the term" Appendix" applies to the annexes to the present document.

1 PART I: GENERALITIES

1.1 DEFINITIONS

CAS (Chemical Abstracts Service) Registry Numbers[1] are universal and precise identifiers of individual chemical compounds. The second column of Annex 1 to the PRTR Decision indicates the CAS number of each pollutant, when available.

Determination limit means the limit of quantification defined as the minimum concentration or amount of a substance for which specified requirements for a given set of relevant quality criteria are fulfilled.

Diffuse sources means the many smaller or scattered sources from which pollutants may be released to land, air or water, whose combined impact on those media may be significant and for which it is impractical to collect reports from each individual source.

Facility means one or more installations on the same site that are operated by the same natural or legal person.

Hazardous waste means any waste which is defined by separate regulations and which has one or more of the properties that are hazardous to human health and to the environment due to its origin, composition or concentration, as well as the waste in waste list which is specified as hazardous.

Installation means a stationary technical unit where one or more activities listed in Annex 1 as having PRTR reporting obligations, are carried out, and any other directly associated activities which have a technical connection with the activities carried out on that site and which could have an effect on emissions and pollution. Several "technical units" on the same site should be considered as one installation if one of the activities is directly associated with the other or both units are served by the same activity (located on the same site). The 'same site' means the same location and is a question of judgement for each facility.

Off-site transfer means the transfer outside the boundaries of the site of waste designated for disposal or recovery and of pollutants in wastewater designated for wastewater treatment via sewer or other transport mechanism.

Operator means a natural or legal person who is the responsible person or the manager of the facility and has the authority for the day-to-day management of the facility and the ability to ensure compliance with the permit. The operator may be the owner of the site.

Pollutant means a substance or a group of substances that may be harmful to the environment or to human health on account of its properties and of its introduction into the environment.

Reporting year means the calendar year for which data on releases and transfers of pollutants outside the site must be collected.

Release means any introduction of pollutants into the environment as a result of any human activity, whether deliberate or accidental, routine or non-routine, including spilling, emitting, discharging, injecting, disposing or dumping, or through sewer systems without final wastewater treatment.

Reporting year means the calendar year for which data on releases of pollutants and off-site transfers

[1] http://www.cas.org/expertise/cascontent/registry/regsys.html (as on 03/3/2011)

must be gathered.

Site means the geographical location of the facility.

Substance means any chemical element and its compounds, with the exception of radioactive substances.

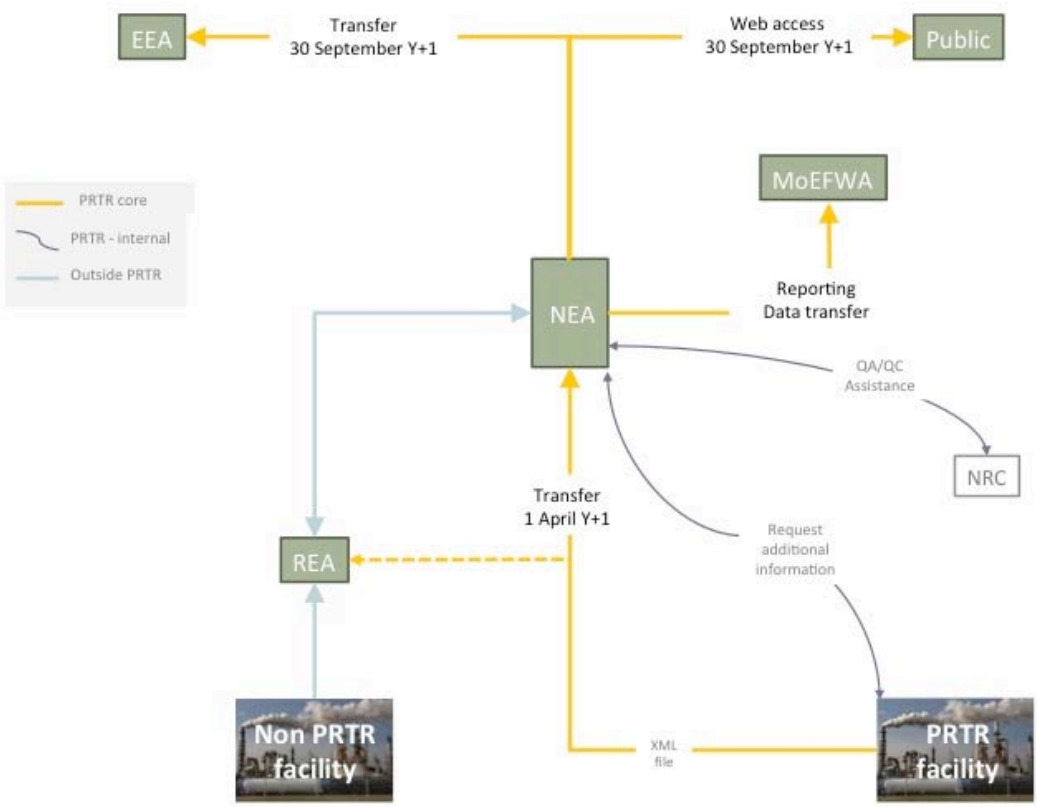
Waste means any substance or objects that the holder disposes or intends to dispose or is required to dispose pursuant to one of the waste categories.

Wastewater means urban, domestic and industrial used water containing pollutants.

Water treatment, and any other used water, which is subject, because of the substances or objects it contains, to regulation by Community law.

1.2 IMPLEMENTING SCHEME AND SYSTEM

The scheme implemented for fulfilling PRTR requirements is visualised in the following figure.



PRTR organisational scheme

Facilities are responsible for measuring, calculating or estimating overall emissions in accordance with the provisions laid down in the PRTR Decision and the obligations stipulated in their integrated environmental permit.

Reporting on emissions and releases must be done **by 1 April** of the year following the reporting year and according to the rules contained in the present document (art.19).

Reports on releases and emissions from facilities are **transmitted directly to the NEA at the national level**. In parallel, the same reports may be sent to the REAs when relevant. **For reporting to the NEA, the operator will use the computerised input module.** The NEA will also produce, as a separate document, a user manual on how to operate the input module.

The NEA will process the standardised files received from the facilities. Main responsibilities of the NEA are:

- validate the data and information received;
- insert information and data received from the facilities within the central national database;
- manage this database and produce summary reports addressed to policy and decision makers as well as to the public;
- ensure web access to the database to the public by end December of the year following the reporting year as well as
- generate reports and fulfil international data reporting obligations by end December of the year following the reporting year.

2 PART II: GUIDELINES

2.1 SCOPE OF PRTR

The Decision concerns facilities carrying out one or more activities listed in its Annex 1.

The PRTR activities are grouped in 9 activity sectors:

1. energy,
2. production and processing of metals,
3. mineral industry,
4. chemical industry,
5. waste and wastewater management,
6. paper and wood production and processing,
7. intensive livestock production and aquaculture,
8. animal and vegetable products from the food and beverage sector and
9. other activities.

The activities include in particular activities covered by Directive 96/61/EC (the "IPPC" Directive), as well as thermal power stations, mining, quarrying and metalworking industries, chemical plants, paper and timber industries and also waste and waste-water treatment plants.

Facility means one or more installations on the same site that are operated by the same natural or legal person (see definition). The same site means the same location. A site does not become two sites merely because two parcels of land are separated by a physical barrier such as a road, a railway or a river.

If one operator carries out several activities at the same facility at the same site, the capacities of such activities will be added together. The production capacities of the individual activities should be aggregated at the Annex 1 level. The sum of the capacities is then compared with the capacity threshold for the specific Annex 1 PRTR activity.

When the capacity threshold is exceeded, there is an obligation for the facility's operator to report releases and off-sites transfer of the pollutants and substances specified in Annex 2 of the PRTR Decision where 91 pollutants are listed. These pollutants are of concern for one or more of the three environmental sectors of interest (air, water and land).

Facilities must report **on all pollutants** for which monitoring provisions are **specified in their environmental permit** as well **on all other relevant sector specific pollutants** listed in Appendixes 1 (for air) and 2 (for water) to the present Guidance with the additional condition that certain release threshold values or threshold values for off-site transfer of pollutants in waste waster destined for wastewater treatment or threshold values for waste must also be exceeded. For releases of pollutants to air, water and land and for off-site transfers of pollutants in wastewater the corresponding threshold values are specified for each pollutant in Annex II of the PRTR Decision.

2.2 IDENTIFICATION OF THE FACILITY

The NEA will attribute a **unique identifying code to each facility**. This code, specified in the environmental permit, will be used by the facility for reporting to the NEA. Identification code should not be changed unless there is an overriding need to do so.

In case of changes occurring at the facility such as closure, relocation, severance or merger of facilities, the operator will inform the NEA. The NEA will evaluate the necessity to attribute a new identification code. If deemed necessary, a new code will be communicated to the facility.

In general the following recommendations apply in respect of any change of identification numbers:

- in the case of relocation of a facility, the facility will be identified with a new code;
- if a facility changes only its operator name or parent company, the identification number will remain the same;
- if a facility merges with another facility at the same site, a new identification number shall be issued. A new reporting facility shall, when reporting, indicate a new identification number with a reference to previous identification numbers of merged facilities;
- in case the reporting facility is divided into two or more facilities out of which only one remains a reporting facility, the identification number shall remain the same for that facility.
- in case the reporting facility is divided into two or more new reporting facilities, a new identification number shall be issued for each new reporting facility. All the new reporting facilities shall, when reporting indicate new identification number with a reference to identification number of divided facility.

It would be helpful if, for every reporting year, the facility reports in the "Textual information" field of the facility report any changes to the "history" of the facility for the last ten years.

2.3 POLLUTANTS

Annex 2 of the Decision lists the 91 pollutants that are relevant for reporting under PRTR. A sequential number, the CAS number and the abbreviation are given for each pollutant.

The Pollutants that are mainly focused on in the PRTR list include greenhouse gases, acid rain pollutants, ozone-depleting substances, heavy metals and certain carcinogens such as dioxins.

As mentioned under 3., facilities must report **on all pollutants** for which monitoring provisions are **specified in their environmental permit** as well **on all other relevant sector specific pollutants** listed in Appendixes II (for air) and III (for water) to the present Guidance with the additional condition that certain release threshold values or threshold values for off-site transfer of pollutants in waste waster destined for wastewater treatment or threshold values for waste must also be exceeded. For releases of pollutants to air, water and land and for off-site transfers of pollutants in wastewater the corresponding threshold values are specified for each pollutant in Annex 2 of the PRTR Decision.

Any activity within a facility is usually related to a typical pollutant release spectrum. The Appendices I and II of the present document contain two tables giving lists of pollutants for air and water potentially released in the performance of a specified PRTR-relevant activity. Where a facility that performs a PRTR-relevant activity releases additional pollutants not specified for that activity in the tables, but contained in Annex 2 to the PRTR Decision, the pollutants have to be reported.

Both tables are **indicative only** and should not be interpreted as a standard list of parameters. To decide which parameters are relevant to each specific activity, Appendices I and II should be referred to together with information contained in permit applications, site inspection reports, process flow sheets, material balances, read-across of similar operations elsewhere, engineering judgements, published and peer-reviewed literature and the results of previous measurement exercises. As a result, it might be – this is often the case - that for a certain activity fewer or possibly more pollutants than indicated have to

be considered.

In practice, the PRTR Decision Annex 1 pollutants that are relevant for reporting purposes will be decided for each facility on a case-by-case basis. To decide which parameters are relevant to each specific installation, Appendices I and II should be referred to, together with information contained in Environmental Impact Assessments (EIAs), permit applications, site inspection reports, process flow sheets, material balances, read-across of similar operations elsewhere, engineering judgments, published and peer-reviewed literature and the results of previous measurement exercises. As a result, it might be that for a certain activity fewer or possibly more pollutants than indicated have to be considered. Extensive release monitoring campaigns should be avoided. However, in case of doubt, a representative measurement might result in more certainty. In most cases plausibility checks will be sufficient to determine whether a certain pollutant could be released.

The **background load** of a certain pollutant in water may be taken into account when assessing releases. For example, if water is collected at the site of the facility from a neighbouring river, lake or sea as process or cooling water, and afterwards released from the site of the facility **into the same river, lake or sea**, the "release" caused by the background load of that pollutant can be subtracted from the total release of the facility. The sampling of water and measurements of pollutants in collected inlet and released outlet water must be carried out in a way ensuring representativeness of the conditions occurring over the reporting period. If the additional load results from the use of extracted groundwater or drinking water, it should not be subtracted since it increases the load of the pollutant in the river, lake or sea.

If concentrations in releases are **below quantification or detection limits** this does not always allow conclude that emissions are not significant. This can happen when pollutants are "diluted" below the determination limit e.g. in large wastewater or exhaust air volumes generated by facilities. Possible procedures to determine releases in such cases include measurement closer to the source (e.g. measurement in part streams before entering a central treatment plant) and/or estimation of releases e.g. on the basis of pollutant elimination rates in the central treatment plant.

2.4 RELEASES AND OFF-SITE TRANSFERS

The total releases to air, water and land shall include all releases from all sources included in Annex 1 to the PRTR decision at the site of the facility (there are special considerations for land releases - art. 9[2]).

Reported **releases and off-site transfers** are totals of releases and off-site transfers from all **deliberate, accidental, routine and non-routine** activities of the facility. It covers both fugitive and diffuse emissions

Non-routine activities are **extraordinary activities** that are carried out under controlled operation of Annex 1 activities and that may lead to increased releases of pollutants. For example: shut-down and start-up processes before and after maintenance operations.

Accidental releases are defined as all releases which are **not deliberate, routine or non-routine, and resulting from uncontrolled developments** in the course of the operation of Annex 1 activities

[2] Waste which is subject to 'land treatment' or 'deep injection' disposal operations shall be reported as a release to land only by the operator of the facility originating the waste.

on the site of the facility. Operators are obliged to specify any data that relate to accidental releases.

As mentioned above, the quantity of accidental releases has to be included in the total quantity of releases. Usually it is possible to quantify accidental releases. Quantification might, for example, be possible on the basis of determination of residual quantities in tubes or tanks or by considering the duration of an accidental release and relating this to assumed flow rates. In particular cases it might, however, be impossible to evaluate quantities for all relevant pollutants particularly when accidental releases to air also occur.

Fugitive and diffuse emissions, mostly relating to air, are emissions that are not released via one point source, like vents or stacks. Examples of fugitive emissions include exhaust emissions from vehicles, evaporative emissions from vehicle fuel tanks, volatilisation from vats and other storage tanks, open vessels, material handling, etc. Emissions from ridgeline roof vents, louvers and open doors of a building, equipment leaks and flanges are other examples of fugitive emissions.

An **off-site transfer of pollutants in wastewater** means the movement beyond the boundaries of a facility of pollutants in wastewater destined for wastewater treatment including industrial wastewater treatment. In other words, it comprises all relevant substances transferred outside the facility to wastewater treatment plant via sewer or other means, for example, by tanker.

An **off-site transfer of waste** means the movement of wastes arising from process-related activities and transferred beyond the boundaries of a facility for disposal or recovery.

Releases and off-site transfers originating from remediation measures (for example decontamination of polluted soil or groundwater) on the site of the facility shall be reported if the original contamination is related to an ongoing Annex 1 activity.

Releases and off-site transfers of wastewater have to be reported in terms of the quantity of pollutants released in kg/year with three significant digits. The rounding to three significant digits does not refer to the statistical or scientific uncertainty, but reflects only the accuracy of the reported data as is shown in the following examples.

Original result of the release determination in kg/year	Results to be reported in kg/year (with three significant digits)
0,0123456	0,0123
1,23789	1,24
123,45	123
1.023,789	1.020
10.009 kg/year	10.000

Similarly off-site transfers of waste have to be reported with three significant digits.

Information on the method used to derive the information for reporting on these pollutants, the type of waste (hazardous, non-hazardous) and the intended waste treatment (recovery, disposal), as well as institutions/companies that will perform treatment or final disposal have to be reported. The waste destination(s) (name and address of recoverer/disposer and the address of the actual site of recovery/disposal) are required.

If a facility carries out **both Annex 1 and non-Annex 1 activities**, the releases and off-site transfers from non-Annex 1 activities are excluded from the reported data. However, when it is not possible to separate and quantify the contributions of the non-Annex 1 activities, e.g. where no sampling point for the non-Annex 1 activity exists (e.g. in the case of highly interlaced sewer systems), it might be practical and cost effective to report the releases from non-Annex 1 activities together with those from Annex 1 activities.

The following table gives an overview of the specifications corresponding to the reporting requirements for facilities in accordance with the PRTR Decision.

Releases	Medium	Quantity[1]	M/C/E[3]	Method used[4]		
	to air	kg/year[2]	✓	✓		
	to water	kg/year[2]	✓	✓		
	to land	kg/year[2]	✓	✓		
Off site transfers	**Handling**	**Quantity[1]**	**M/C/E[3]**	**Method used[4]**	**Recoverer/disposer: name & address**	**Actual site address**
pollutants in wastewater[5]		kg/year[2]	✓	✓		
non-hazardous waste	for disposal	t/year	✓	✓		
	for recovery	t/year	✓	✓		
hazardous waste within the country	for disposal	t/year	✓	✓		
	for recovery	t/year	✓	✓		
hazardous waste transboundary	for disposal	t/year	✓	✓	✓	✓
	for recovery	t/year	✓	✓	✓	✓

1 quantities are totals of releases from all deliberate, accidental, routine and non-routine activities at the site of the facility or of off-site transfers.

2 the total quantity of each pollutant; in addition, any data that relate to accidental releases have to be reported separately whenever available.

3 it has to be indicated whether the reported information is based on measurement (M), calculation (C) or estimation (E). See chapters 9-12 of this document.

4 Where data are measured or calculated, the method of measurement and/or the method for calculation shall be indicated.

5 Off-site transfer of each pollutant destined for wastewater treatment.

2.5 DATA SUBMISSION

Reports on releases and emissions from PRTR facilities are submitted directly to the NEA. In parallel, the same reports will also be sent to the local REA when prescribed in the environmental permit. **Reports on releases and emissions from PRTR facilities do not replace any other reporting**

obligations prescribed in the environmental permit.

The NEA will provide the operator with a **data input module**. This module, covering all requirements laid down in the PRTR Decision and its Annexes, allows operators to input all necessary data and generates both *pdf* and *xml* files. Both files are automatically transmitted by email to the NEA (predefined addresses). In case of any change to the input module or in case the operator was not provided with the input module when obtaining the environmental permit, the NEA shall inform the operator of the facility obliged to report on how the input module may be obtained.

Before forwarding the data to the NEA, the operator shall ensure an appropriate quality of the data by ensuring that the information is complete, consistent and credible (see chapter 13).

If an operator of a facility has justifiable reasons that specific information concerning releases or off-site transfers should be kept confidential, he shall inform the competent authorities thereof (see chapter 14). The input module allows indicate for which data confidentiality is requested.

In case the operator, either upon request of the NEA or on voluntary basis, wants to modify, correct or complete a report already submitted, the operator will resubmit the **complete updated report**. The resubmitted report will replace the previously submitted one and will be considered as the official report.

Operators are obliged to keep records of the data from which the reported information was derived and a description of the methodology used for data gathering for a period of five years.

Reporting concerning releases and transfers for a year (X) must be communicated by 1 April of the following year (X+1). For example, reporting on emissions in 2012 (reporting year) will be reported by 1 April June 2013 at the latest.

2.6 QUANTIFICATION AND ASSESSMENT OF RELEASES AND OFF-SITE TRANSFERS

Reporting shall be carried out based on measurement, calculation or estimation of releases and off-site transfers.

Measured

Release data are based on measurements (class '**M'**). Additional calculations are needed to convert the results of measurements (concentration) into annual release data (mass). For these calculations the results of flow determinations are needed. 'M' is used when the releases of a facility are derived from direct monitoring results for specific processes at the facility, based on actual continuous or discontinuous measurements of pollutant concentrations for a given release route. 'M' should also be used when the annual releases are determined based on the results of short term and spot measurements.

More details are given in chapter 10.

Calculated

Release data are based on calculations (class '**C'**) using activity data (fuel used, production rate, etc.) and emission factors or mass balances. In some cases more complicated calculation methods need to be applied, using variables like temperature, global radiance etc.

More details are given in chapter 11.

Estimated

Release data are based on non-standardised estimations (class '**E'**) when the releases are determined by best assumptions or expert guesses that are not based on publicly available references or in case of

absence of recognised emission estimation methodologies or good practice guidelines.

More details are given in chapter 12.

Data collection will be done in accordance with **internationally approved methodologies** where such methodologies are available. The following methodologies are considered as internationally approved:

*Measurement '**M**'*

- CEN and ISO standards as measurement methodologies,

*Calculation '**C**'*

- "Guidelines for the monitoring and reporting of greenhouse gas emissions under Emission Trading Scheme",
- the "IPCC Guidelines" and
- the "UN-ECE/EMEP Atmospheric Emission Inventory Guidebook" as calculation methodologies.

The operator may use **"equivalent" methodologies** other than internationally approved methodologies, even when available, if one or more of the following conditions are fulfilled:

- The operator uses one or more measurement, calculation or estimation methodologies already prescribed by the competent authority in a licence or an operating permit for that facility (method code to be reported: '**PER**').
- A national or regional binding measurement, calculation or estimation methodology is prescribed by legal act for the pollutant and facility concerned (method code to be reported: '**NRB**').
- The operator has shown that the alternative measurement methodology used is equivalent to existing CEN/ISO measurement standards (method code to be reported: '**ALT**').
- The operator uses an equivalent methodology and demonstrated its performance equivalence by means of Certified Reference Materials (CRMs) according to ISO 17025 and ISO Guide 33 together with an acceptance by the competent authority (method code to be reported: '**CRM**').
- The calculation is a mass balance method (e.g. the calculation of NMVOC releases into air as difference from process input data and incorporation into product) and is accepted by the competent authority (method name to be reported: '**MAB**').
- The methodology is a European-wide sector specific calculation method, developed by industry experts, which has been delivered to relevant international organisations, e.g. http://www.ipcc-nggip.iges.or.jp/mail; http://www.unece.org/env/lrtap/TaskForce/tfeip/welcome.htm).
- The methodology could be used unless it is rejected by the international organisation (method name to be reported: '**SSC'**).
- Other calculation methods shall only be used if internationally approved or equivalent methodologies are not available (method name to be reported: '**OTH'**).

Beside the codes '**M**' or '**C**' indicating that values are either measured or calculated, the codes indicated in the following table corresponding to the above mentioned cases will also be reported.

Method used for determination of releases/off-sites transfers	Designation of the method used
Measurement	
Internationally approved measurement standard	**short designation of the relevant standard (e.g. EN 14385:2004)**
Measurement methodology already prescribed by the competent authority in a licence or an operating permit for that facility	PER
National or regional binding measurement methodology prescribed by legal act for the pollutant and facility concerned	NRB
Alternative measurement method in accordance with existing CEN/ISO measurement standards	ALT
Measurement methodology the performance of which is demonstrated by means of certified reference materials and accepted by competent authority	CRM
Other measurement methodology OTH	OTH
Calculation	
Internationally approved calculation method	**short designation of the method used: ETS, IPCC, UNECE/EMEP**
Calculation methodology already prescribed by the competent authority in a licence or an operating permit for that facility	PER
National or regional binding calculation methodology prescribed by legal act for the pollutant and facility concerned	NRB
Mass balance method which is accepted by the competent authority	MAB
European-wide sector specific calculation method	SSC
Other calculation methodology	OTH

The method used must not be reported when values are estimated ('**E**').

2.7 SELECTION OF METHODOLOGY 'M', 'C' OR 'E'

The operator of the facility has to decide before collecting the data which quantification methodology ('M', 'C' or 'E') for a certain pollutant would provide "best available information" for the reporting. Where data are measured or calculated, the method of measurement and/or the method for calculation shall also be indicated.

The Method Code section of the releases worksheets provide for only a single methodology for each

Pollutant parameter. However, it may be anticipated that, for some Pollutants, a combination of different methodologies will have been used to quantify the total emission. This may be because the same Pollutant was released from several emission points in respect of which different quantification methods were used. More probably, the total may include a measured quantity released as a routine permitted emission and a calculated or estimated quantity arising from accidental or fugitive emissions.

In such cases, the methodology capturing the highest percentage of the pollutant should be ascribed to the total quantity released.

Example

A release to air of carbon dioxide is established from different air emission points using different methodologies:

Stack 1: emission sampled using international monitoring standard Code 'M' 75%

Stack 2: emission calculated using IPCC guidelines Code 'C' 20%

Stack 3: emission estimated from standby boiler Code 'E' 5%

In this instance, the overall emissions should be designated under code 'M', as the highest percentage of the pollutant was quantified by measurement.

In summary, the operator of the facility has to decide, before collecting the data, which determination methodology for a certain pollutant, whether this be a Measurement, Calculation or Estimation methodology, results in "best available information" for the reporting of the annual release of that pollutant.

2.8 MEASUREMENT METHODS (CODE 'M')

The method covers both periodic (discontinuous) sampling and continuous monitoring and is based on measured concentrations of the substance in a process or waste stream and volume or flow rate of that stream.

Additional calculations are needed to convert the results of measurements into annual loads.

One commonly used method is the Continuous Emission Monitoring System (**CEMS**), mainly used for pollutants emitted in air. It provides a continuous record of emissions over time, usually by reporting pollutant concentration. Once the pollutant concentration is known, emission rates are obtained by multiplying the pollutant concentration by the volumetric gas or the discharged the gases in the stack or in the duct.

It is important to note that prior to using stack testing to estimate air emissions, a protocol for collecting and averaging the data should be developed in order to ensure that the estimate is representative and satisfy the relevant environmental requirements for emission estimates.

The annual quantities should be determined with a frequency and duration of data collection sufficient over the year to give reasonably representative and comparable data. When determining the frequency, it is important to balance the requirements with emission characteristics, risk to the environment, practicalities of sampling and the costs.

Both continuous and discontinuous measurements, such as weekly / quarterly spot samples are included in class M. Often, additional calculations will be required to convert the results of spot sample

measurements into annual emission data, but class M remains appropriate in such instances.

Two common formulae for calculating mass flow from discrete or spot sample results are provided below. Further common conversion equations and relevant calculation examples are provided in Appendix 3.

Calculate Mass flow

mg/m3 to kg/year

To convert a normalised gas or liquid spot sample results

in mg/m3 to the required Annual Mass Flow in kg per year

the concentration in mg/m3 has to be multiplied by a flow rate in m3/hr

$$\frac{Conc. * hourly\ rate}{1,000,000}$$

$$=$$

$$mass\ flow\ \ in\ kg\ per\ hour * hours\ per\ year$$

$$=$$

$$mass\ flow\ \ in\ kg\ per\ year$$

Example: (150 mg/m3 x 4000 m3/hr)/1,000,000 = 0.6 kg/hr x 8760 = 5,256 kg/yr

Calculate Mass flow

mg/litre to kg/year

To convert a liquid spot sample result i

n **mg/litre** to the required Annual Mass Flow in **kg per year**

the concentration in **mg/litre** has to be multiplied by a volume in litres/day

$$\frac{Conc. * litres\ per\ day}{1,000}$$

$$=$$

$$mass\ flow\ \ in\ kg\ per\ day * days\ per\ year$$

$$=$$

$$mass\ flow\ \ in\ kg\ per\ year$$

Example: (20 mg/litres x 5000 litres/day)/1,000 = 100 kg/day x 365 = 36,500 kg/yr

Data on releases and off-site transfers of pollutants in wastewater may be based on measurements. In the case of off-site transfers of waste the annual data reported are usually obtained by weighing wastes.

A list of internationally approved measurement methods for the release of pollutants into air, water and off-site transfer of wastewater is given in Appendix IV. The list covers CEN and ISO standards and provides guidance on the availability of standardised measuring methods for air and water pollutants.

2.9 CALCULATION METHODS

These methods are based on calculations using activity data (fuel used, production rate, etc.) and emission factors or mass balances.

Emission factors

Emission factors relate the quantity of substances emitted from a source to the activity associated with those emissions.

Emission factors are usually expressed as the weight of the substance emitted by the unit weight, volume, distance, or duration of the activity emitting the substance (for example, kilograms of Total VOCs per cubic metre of paint or ink produced).

The equation for the calculation of emissions before emission reduction controls are applied is:

$$E_x = AR \times EF_x$$

and for emissions after reduction controls are applied:

$$E = AR \times EF_x \times (1\text{-}ER/100)_x$$

where

E_x Emission of contaminant x (in kg)

AR Activity rate (weight, volume, distance or duration)

EF_x **Emission factor** of contaminant x, in kg per unit of weight, volume, distance or duration (AR)

ER_x Overall emission reduction efficiency of contaminant x, in %

Emission factors are available for many emission source categories and are generally based on the results of source sampling tests performed at one or more facilities within a specific industry.

In the case of off-site transfers of waste the calculation of the annual quantity of waste(s) may use factors agreed on international, national or sectoral level which, for example, indicate the waste amount in relation to the material produced or the input of raw material.

Mass balance

The general form quoted for a mass balance is: the mass that enters a system must, by conservation of mass, either leave the system or accumulate within the system.

In the absence of a chemical reaction the amount of any chemical species flowing in and out will be the same. However if there is a reaction then the mass balance equation must be amended to allow for the generation or depletion (consumption) of each chemical species.

When calculating emissions, the general equation for a mass balance is:

$$M_{emitted} = M_{in} - M_{product} - M_{accumulated/depleted}$$

where

M_{in} Mass of compound in the raw material feed

$M_{product}$ Mass of compound in the finished product

$M_{accumulated/depleted}$ Mass of compound accumulated or depleted in the system

Pollution control equipment should be accounted for when mass balance calculations are performed.

An indicative list of internationally approved calculation techniques is given in Appendix V.

2.10 ESTIMATION METHODS

In those relatively rare cases where measurement and calculation methods are not available, or in the case of accidents, emissions data can be assessed on the basis of engineering principles and judgment, i.e. on non-standardised estimations derived from mass balances and best assumptions.

Releases can be estimated by using knowledge of the chemical and physical processes involved, the design features of the source and an understanding of the applicable physical and chemical laws. The reliability of these estimates depends on the complexity of the process and the level of understanding of its physical-chemical properties.

To apply an engineering assessment method, four basic principles will be followed:

- Review all data pertaining to the specific source and to the industrial sector in general.
- Revise and refine the approximation as more accurate or additional data become available.
- Whenever possible, estimations should be crosschecked by using alternate methods of estimation or calculation.
- Employ good record keeping by documenting all related information for further refinement when more accurate data become available.

Predictive Emission Monitoring (**PEM**) is another type of alternative that could be used. PEM is based on developing a correlation between pollutant emission rates and process parameters. Correlation tests must be performed to develop the relationship between contaminant emission rates and process parameters. After the verification, it can be used along with operating data to estimate annual emissions from the source.

The difference between CEMS and PEM is that PEM does not need actual pollutant monitoring analyzers. However, some sensors (e.g., temperature, pressure, flow rate) and data recording systems are still needed.

An indicative list of internationally approved estimation techniques is given in Appendix VI.

2.11 QUALITY ASSESSMENT

Operators are responsible for the quality and validity of the information and data that they report.

If a quality assurance system such as ISO 9001:2008 (“Quality management systems – Requirements”) or an environmental management system such as EMAS (“EU Eco-Management and Audit Scheme” - Regulation (EC) No 1221/2009) or ISO 14001:2004 (“Environmental management systems -- Requirements with guidance for use”) or other similar/analogous national system is already being used by the facility, the reporting of the PRTR data might be included within that system to help to ensure the highest possible quality of the data.

The ISO 14000 environmental management standards exist to help organizations:

- minimize how their operations (processes etc.) negatively affect the environment (i.e. cause adverse changes to air, water, or land);
- comply with applicable laws, regulations, and other environmentally oriented requirements, and

- continually improve in the above.

ISO 14000 is similar to ISO 9000 quality management in that both pertain to the process of how a product is produced, rather than to the product itself.

Operators are obliged to use the “best available data” when preparing their reports. In accordance with article 23 of PRTR Decision, data reported by operators should be of high quality in particular as regards its completeness, consistency and credibility as defined below:

Completeness means that the reported data should cover all releases and off-site transfers of all pollutants and wastes. Completeness means also that all additionally information on the identity of the facility/activities and necessary for the assessment of the data is fully reported.

Consistency means that data shall be reported on the basis of unambiguous and uniform definitions, source identification and reliable methodologies for the determination of releases over several years to allow trend analysis. Consistent reporting will enable comparison of the reported data with previous release data of reporting facilities or with data of similar sources in other countries. In this respect a consistent use of the identification number of facilities, including the indication of changes of the identification number, is essential.

Credibility refers to the trustworthiness, authenticity or reliability of the data. If the approaches and data sources used in an inventory development project are considered consistent, then users will have an acceptable degree of confidence in the releases data developed from those techniques..

Another important issue is **transparency**. Transparency is used to represent the condition of being clear and reflecting the reality. For the interpretation of the data on releases and transfers of pollutants, it is important to know how the data collection was performed, how the releases and transfers of pollutants were measured or estimated, which methodology and emission factors were used to estimate emissions, what the units of the reported data are and confirmation that validation was done.

Operators must be able to provide evidence that their data and information meet the quality criteria detailed above.

The NEA, with the technical support of the Reference, have the duty to assess the quality of information provided by operators.

2.12 CONFIDENTIALITY

The NEA, with indications from the operator, decides which data is to be kept confidential. The data that the NEA classifies as confidential will not be transmitted to other third parties. All decisions on confidentiality taken by the MoE will be in accordance with the provisions of the PRTR Decision.

In general, all grounds of confidentiality of article 17 of the PRTR Decision can be invoked to withhold any type of information reported by operators.

Information provided by the operator shall not be published where publication or transfer to third persons might adversely affect on:

- international relations,
- national defence, public security,
- the course of justice, a court procedure, a person’s right to fair trial, and/or
- criminal, administrative or disciplinary investigations.

Also, the operator may request the following information to be kept confidential:

- information that would reveal personal data and the interests of those concerned would thus be significantly affected;
- information on intellectual property rights, especially copyrights, that would be violated by making information accessible;
- information that would make commercial or industrial secrets accessible.

When considering the confidentiality of a particular type of information, the NEA shall evaluate the grounds for confidentiality and should weigh the public interest served by disclosure against the interest served by confidentiality.

In practice, confidentiality means that in the case of data regarding releases and off-site transfers of pollutants in wastewater only the name of the pollutant should be kept confidential and instead should be replaced by the name of a group of pollutants, the method of measurement/calculation could not be reported. The aggregation is done by the NEA, the facility reporting individually for each pollutant.

Groups of pollutants applying for confidential data

Groups of pollutants	Pollutant ref. number (PRTR Decision)
Greenhouse gases	1, 3, 4, 5, 9, 10
Other gases	2, 6, 7, 8, 11, 14, 15, 16, 80, 84, 85
Heavy metals	17 - 24
Pesticides	25 – 30, 32, 33, 36 39, 41, 44 – 46, 51, 59, 67, 74, 75, 77, 89
Chlorinated organic substances	31, 34, 35, 40, 42, 43, 47 – 50, 52 – 58, 60, 63, 90
Other organic substances	61, 62, 64 – 66, 68 – 73, 76, 78, 87, 88, 91
Inorganic substances	12, 13, 79, 81 – 83,

In case of confidentiality requested for waste transfers, the quantities will be kept confidential.

3 PART III: QUESTIONNAIRE

Remark: *information marked with an asterisk ('*') will be treated as confidential upon accepted confidentiality request and in accordance with the provisions given in chapter 14.*

3.1 GENERAL INFORMATION

3.1.1 DECLARATION

1. *Reporting year*

The calendar year for which data on releases of pollutants and off-site transfers must be gathered.

2. Identification code of the facility

Code attributed by the Entity's MoE.

3. Report filled in by

Name and position (e.g. "head of laboratory") of the person who has filled in the questionnaire.

4. Report validated by

Name and position (e.g. "production manager") of the person who has validated the data and information included in the report.

5. Date

Date of report validation

3.1.2 IDENTIFICATION

6. Name of the parent company

A parent company is a company that owns or controls the company operating the facility (for example by holding more than 50% of the company's share capital or a majority of voting rights of the shareholders or associates).

7. Name of the facility

The operator or owner name plus location if necessary.

8. Address of the facility

Street, municipality, qarku

9. Contact person

Name and position of the person to be contacted for administrative or public enquiries.

10. Geographical coordinates

Longitude and latitude co-ordinates giving a precision of the order of at least 500 meters and referring to the geographical centre of the site of the facility. To be expressed in degree decimals.

11. *River basin district*

(a) *DRINI*

(b) *BUNA*

(c) *MATI*

(d) *ISHMI*

(e) *ERZENI*

(f) *SHKUMBINI*

(g) *SEMANI*

(h) *VJOSA*

12. *Main economic activity name – NACE*

Indicate the NACE activity name according to EU Commission Regulation 29/2002/EC of 19 December 2001 amending Council Regulation N° 3037/90 on the statistical classification of economic activities in the European Community.
(http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2002:006:0003:0034:EN:PDF)

13. *Actual production for the reported year**

Identify the main product of the main activity carried out at the facility, the quantity produced and the relevant units of measurement.

(i) *Product name*

(j) *Production volume **

(k) *Production units*

14. *Number of installations at the site of the facility**

15. *Number of operating hours for the reported year **

Can not exceed 24 * 365 or 366.

16. *Number of employees **

In full time equivalent.

17. *NUTS code*

Not existing yet for BiH; **to be left at blank**.

18. *Website address*

Website of the facility when existing; if not, website of the parent company when existing.

19. *Information on public access*

Textual information.

Specific information such as email address for public enquiries, links to websites of interest etc.

20. *Description of facility's activities and technical processes **

Textual information.

For first reporting year, in few short sentences description the production process (basic raw materials

used, the ways of processing toward the final product, final product produced).

21. *Histry of the facility **

Textual information.

For subsequent reporting years, information on all changes to the process and in the characteristics and types of equipment in the technological process or emission control equipment that could affect emission limits.

22. *Confidentiality requested*

Indicate whether confidentiality of mandatory information is requested.

23. *Confidentiality justification*

Indicate the reason for which confidentiality is requested.

3.1.3 ACTIVITIES

All PRTR activities (list in Annex 1) carried out at the facility have to be listed:

24. *Activity number*

Indicate sequential number.

25. *Activity – Annex 1*

Give the name of the activity.

26. *Operational status*

Indicate whether this activity was in operation during the reported year.

3.1.4 RESOURCES AND ENERGY

27. *Total annual consumption of surface water*

The annual quantity of surface water directly used in the facility. To be expressed in cubic meter per year (m^3/year).

28. *Total annual consumption of groundwater*

The annual quantity of groundwater (borehole) directly used in the facility. To be expressed in cubic meter per year (m^3/year).

29. *Total annual consumption of mains water*

The annual quantity from mains water supply directly used in the facility. To be expressed in cubic meter per year (m^3/year).

30. *Total annual water consumption of the facility*

Equal to surface water consumption + groundwater consumption + mains water consumption. To be expressed in cubic meter per year (m^3/year).

31. *Energy resources: consumption*

Indicate the consumption in the indicated unit for each of the following resource when appropriate:

- Electric power in MWh
- Natural gas from public utility in GJ

- Coal in t
- Light distillate oil in t
- Heavy distillate oil in t
- Diesel in t
- Wood in t
- Biomass in t
- LPG in GJ
- Coke gas in GJ
- Bottled gas (in reservoirs) in GJ
- Other in GJ

To this end it may be need to convert fuel masses and volumes into energy equivalents using appropriate calorific values (CV, usually given as kJ or MJ per tonne or m^3).

The fuel's net CV (or lower heating value) rather than gross CV (or higher heating value) will be used as the basis of calculation. Net CV measures the actual energy value of the fuel after subtraction of the energy required to vaporize the fuel's water content. Net CV is determined by subtracting the heat of vaporisation of water content in a fuel from the gross CV.

These data can be found in or calculated from the bills for monthly consumption of electric power and natural gas, or purchase of wood and other fuels.

*32. Gross total raw materials consumption **

This is the annual quantity of **materials directly used** in the manufacturing process: this includes virgin raw materials, manufactured materials, wastes, by-products or recovered materials. Data have to be expressed in tonnes/year.

Calculate tonnage of raw materials as gross rather than net, i.e. include all manufacturing materials received whether or not they are contained in the final commercial product and/or by-products. It includes materials removed from the feedstock consignment on site prior to the main manufacturing process (e.g. packaging).

If deriving total tonnage of raw materials from a detailed inventory of all materials is unduly burdensome, then estimate the tonnage by scaling up from the main materials, e.g. scale up from the first 80%. This could be done by sampling the quantities of other materials to estimate their proportion of total materials, then applying this factor to the total.

3.1.5 PERMITS

For each permit, indicate:

33. Type of permit

Environmental, water, urban, construction, waste.

34. Date of application

Date on which application for obtaining the permit has been submitted to the responsible authorities.

35. Date of permit issuance

Date on which permit was issued by the competent authorities.

36. Permit number

37. *Validity period*

Indicate the validity end date.

3.1.6 INSPECTIONS

For each inspection:

38. *Type of inspection*

Environmental, water, forestry.

39. *Date of inspection*

Last date of inspection.

40. *Inspector's name*

41. *Fulfilment*

Indicate whether all permit's obligations have been fulfilled.

42. *Dead line for modifications / changes requested*

Indicate the date by which all modifications / changes have to be done.

43. *Description of the inspection*

Textual information.

44. *Description of requested changes*

Textual information.

3.2 RELEASES TO AIR, WATER AND LAND - OFF-SITE TRANSFERS IN WASTEWATER

Reporting on releases to air, water and soil/land as well as off-site transfer in wastewater will be done as described below:

For each pollutant

45. *Pollutant*

Select the pollutant. Provide the following information for the selected pollutant.

46. *Method **

Indicate the assessment method used (measurement 'M', calculation 'C' or estimation 'E').

47. *Method details **

Give details on the method used, see also chapter 9-12. Not to be reported when values are estimated ('**E**').

48. *Total quantity **

Indicate the total quantity of the pollutant released to medium from all sources of the facility. **The total includes "routine" and "non-routine" releases, accidental releases and releases from diffuse sources**. All quantities have to be expressed **in kg/year** and with three significant digits.

49. *Total accidental release **

Indicate the quantity of the pollutant accidentally released.

50. *Total diffuse release (only for air) **

Indicate the quantity of the pollutant emitted by diffuse/fugitive sources.

51. *Confidentiality requested*

Indicate whether confidentiality is requested for the provided data.

52. *Confidentiality justification*

53. *Comments*

Textual information.

Any relevant comments such as type of accident...

Medium specific considerations are given below.

3.2.1 RELEASES TO AIR

Appendix III to this guide contains an indicative sector specific sub-list of air pollutants. The list contains those air pollutants that are likely to be emitted and aids the identification of relevant pollutants at a given facility for all PRTR activities specified in its Annex 1. A total of 60 pollutants are specified as relevant air pollutants.

'Air' includes both the inside and outside of a building in the context of total substances released. However, when quantifying the amounts released from a given point as part of the overall mass contribution, care must be taken not to double count.

Operators are obliged to specify any data that relate to accidental and diffuse releases whenever such data is available.

Fugitive and diffuse emissions are emissions that are not released via vent or stacks. Examples of fugitive emissions include exhaust emissions from vehicles, evaporative emissions from vehicle fuel tanks, volatilisation from vats and other storage tanks, open vessels, material handling, etc. Emissions from ridgeline roof vents, louvers and open doors of a building, equipment leaks and flanges are other examples of fugitive emissions.

In the case of data indicated as being based on measurement or calculation, the analytical method and/or the method of calculation shall be reported. The method has not to be indicated in case of estimation.

More details on assessment methods (measurement '**M**', calculation '**C**' and estimation '**E**') as well as standards are given in Chapters 9-12.

3.2.2 RELEASES TO WATER

Appendix IV of this guide contains an indicative sector specific sub-list of water pollutants. The list contains shows those water pollutants which might be emitted and aids the identification of relevant pollutants at a specific facility for all PRTR activities specified in its Annex 1.. A total of 64 pollutants are specified as relevant water pollutants.

Operators are obliged to specify any data that relate to accidental releases whenever such data is available.

In the case of data indicated as being based on measurement or calculation, the analytical method and/or the method of calculation shall be reported. The method has not to be indicated in case of estimation.

More details on assessment methods (measurement '**M**', calculation '**C**' and estimation '**E**') as well as standards are given in Chapters 9-12.

3.2.3 RELEASES TO LAND

The reporting on "releases into land" applies only to waste containing pollutant(s) listed in Annex 1 of the PRTR Decision, which is subject to the disposal operations "land treatment" or "deep injection". If waste is treated in such a way, this shall only be reported by the operator of the facility generating the waste.

According to column 1c, a total of 53 pollutants are specified as relevant land pollutants.

The relevant disposal operations according are mainly land treatment of oily sludges and deep injection of saline solutions underground. The off-site transfer (e.g. via pipeline) which often precedes the release to land for those cases need not be reported.

Sludge and manure spreading are recovery operations and therefore shall not be reported as releases to land.

Accidental releases to land are theoretically possible (for example due to the leakage of a pipeline at the location of deep injection) but it is expected that they will only occur in very rare cases. Operators are obliged to specify any data that relate to accidental and diffuse releases whenever such data is available. However, accidental releases of pollutants onto the soil on the site of a facility (for example spillages) do not have to be reported.

In the case of data indicated as being based on measurement or calculation the analytical method and / or the method of calculation should be reported. The method has not to be indicated in case of estimation.

More details on assessment methods (measurement '**M**', calculation '**C**' and estimation '**E**') as well as standards are given in Chapters 9-12.

3.2.4 OFF-SITE TRANSFER IN WASTEWATER

An off-site transfer of pollutants in wastewater means the movement beyond the boundaries of a facility of pollutants in wastewater destined for wastewater treatment including industrial wastewater treatment. The off-site transfer may be carried out via a sewer or any other means such as containers or (road) tankers.

Operators shall report off-site transfers of any pollutant specified in Annex 1 of the PRTR Decision (column 1b) in wastewater destined for wastewater treatment.

3.3 OFF-SITE TRANSFERS OF WASTE

An off-site transfer of waste means the movement beyond the boundaries of a facility of waste destined for disposal or recovery.

Operators shall report off-site transfers of hazardous waste (HW) and non hazardous waste (non-HW) for any operations of recovery or disposal with the exception of the disposal operations of land treatment and deep injection, as these have to be reported as releases to land (see 20.3)

All data have to be expressed **in tonnes/year** of (normal) wet waste and with three significant digits.

The operator has to indicate whether the waste is destined for recovery (code '**R**') or for disposal (code '**D'**). If the waste is destined for waste treatment which includes both recovery and disposal operations, the treatment operation for which more than 50% of the waste is destined should be reported. In those rare cases where the operator is not able to trace whether more than 50% of the waste is disposed or recovered, code "D" should be used.

For transboundary transports of hazardous waste, the name and address of the recoverer or the disposer of the waste and the actual recovery or disposal site have to be reported.

Operators should indicate whether the amount of waste was measured (e.g. by the method of weighing), calculated (e.g. by emission or release factors) or estimated.

The information to be reported is as follows:

54. Type

Indicate type of waste: non hazardous, hazardous waste - outside country, hazardous waste – inside country.

55. Waste handling operation or treatment

Indicate whether recovered (recycled/reused) or disposed ('**R**' or '**D**').

*56. Quantity **

In tons per year.

*57. Method **

Indicate the assessment method (measurement '**M**', calculation '**C**' or estimation '**E**').

*58. Method details **

Give details on the method used, see also chapter 9-12. Not to be reported when values are estimated ('**E**').

59. Recoverer or disposer details

Indicate name and address of the disposer or recoverer.

60. Location (address) of actual treatment

61. Comments

Textual information.

Any relevant comment.

CONSOLIDATING THE ENVIRONMENTAL MONITORING SYSTEM IN ALBANIA

A project funded by the European Union and managed by the Delegation of the European Commission to Albania

PRTR GUIDANCE MANUAL: APPENDIXES

CEMSA Project

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DISCLAIMER

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APPENDIX I INDICATIVE SECTOR SPECIFIC SUB-LIST OF AIR POLLUTANTS

Pollutant no			1	2	3	4	5	6	7	8	9	10	11	14	15	16	17	18	19	20	21	22	23	24	26	28	29	33	34	35	36	39	41
Pollutant Name			Methane (CH_4)	Carbon monoxide (CO)	Carbon dioxide (CO_2)	Hydro-fluorocarbons (HFCs)	Nitrous oxide (N_2O)	Ammonia (NH_3)	Non-methane volatile organic compounds (NMVOC)	Nitrogen oxides (NO_X/NO_2)	Perfluorocarbons (PFCs)	Sulphur hexafluoride (SF_6)	Sulphur oxides (SO_X/SO_2)	Hydrochlorofluorocarbons (HCFCs)	Chlorofluorocarbons (CFCs)	Halons	Arsenic and compounds (as As)	Cadmium and compounds (as Cd)	Chromium and compounds(as Cr)	Copper and compounds (as Cu)	Mercury and compounds (as Hg)	Nickel and compounds (as Ni)	Lead and compounds (as Pb)	Zinc and compounds (as Zn)	Aldrin	Chlordane	Chlordecone	DDT	1,2-dichloroethane (EDC)	Dichloromethane (DCM)	Dieldrin	Endrin	Heptachlor
1		**Energy sector**																															
	(a)	Mineral oil and gas refineries																															
	(b)	Installations for gasification and liquefaction																															
	(c)	Thermal power stations and other combustion installations																															
	(d)	Coke ovens																															
	(e)	Coal rolling mills																															
	(f)	Installations for the manufacture of coal products and solid smokeless fuel																															
2		**Production and processing of metals**																															
	(a)	Metal ore (including sulphide ore) roasting or sintering installations																															
	(b)	Installations for the production of pig iron or steel (primary or secondary melting) including continuous casting																															
	(c)	Installations for the processing of ferrous metals																															
	(d)	Ferrous metal foundries																															
	(e)	Installations for the production of non-ferrous crude metals from ore, concentrates or secondary raw materials by metallurgical, chemical or electrolytic processes and for the smelting, including the alloying, of non-ferrous metals, including recovered products (refining, foundry casting, etc.)																															
	(f)	Installations for surface treatment of metals and plastic materials using an electrolytic or chemical process																															

Pollutant no			42	44	45	46	47	48	49	50	52	53	54	55	56	57	58	59	60	61	62	66	68	70	72	80	81	84	85	86	90
Pollutant Name			Hexachlorobenzene (HCB)	1,2,3,4,5, 6 - hexachlorocyclohexane (HCH)	Lindane	Mirex	PCDD + PCDF (dioxins + furans) (as Teq)	Pentachlorobenzene	Pentachlorophenol (PCP)	Polychlorinated biphenyls (PCBs)	Tetrachloroethylene (PER)	Tetrachloromethane (TCM)	Trichlorobenzenes (TCBs) (all isomers)	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	Trichloroethylene	Trichloromethane	Toxaphene	Vinyl chloride	Anthracene	Benzene	Ethylene oxide	Naphthalene	Di-(2-ethyl hexyl) phthalate (DEHP)	Polycyclic aromatic hydrocarbons (PAHs)	Chlorine and inorganic compounds (as HCl)	Asbestos	Fluorine and inorganic compounds (as HF)	Hydrogen cyanide (HCN)	Particulate matter (PM_{10})	Hexabromobiphenyl
1		**Energy sector**																													
	(a)	Mineral oil and gas refineries																													
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	(f)	Installations for surface treatment of metals and plastic materials using an electrolytic or chemical process																													

Pollutant no			1	2	3	4	5	6	7	8	9	10	11	14	15	16	17	18	19	20	21	22	23	24	26	28	29	33	34	35	36	39	41
Pollutant Name			Methane (CH_4)	Carbon monoxide (CO)	Carbon dioxide (CO_2)	Hydro-fluorocarbons (HFCs)	Nitrous oxide (N_2O)	Ammonia (NH_3)	Non-methane volatile organic compounds (NMVOC)	Nitrogen oxides (NO_X/NO_2)	Perfluorocarbons (PFCs)	Sulphur hexafluoride (SF_6)	Sulphur oxides (SO_X/SO_2)	Hydrochlorofluorocarbons (HCFCs)	Chlorofluorocarbons (CFCs)	Halons	Arsenic and compounds (as As)	Cadmium and compounds (as Cd)	Chromium and compounds(as Cr)	Copper and compounds (as Cu)	Mercury and compounds (as Hg)	Nickel and compounds (as Ni)	Lead and compounds (as Pb)	Zinc and compounds (as Zn)	Aldrin	Chlordane	Chlordecone	DDT	1,2-dichloroethane (EDC)	Dichloromethane (DCM)	Dieldrin	Endrin	Heptachlor
3		**Mineral industry**																															
	(a)	Underground mining and related operations																															
	(b)	Opencast mining and quarrying																															
	(c)	Installations for the production of cement clinker in rotary kilns, lime in rotary kilns, cement clinker or lime in other furnaces																															
	(d)	Installations for the production of asbestos and the manufacture of asbestos-based products																															
	(e)	Installations for the manufacture of glass, including glass fibre																															
	(f)	Installations for melting mineral substances, including the production of mineral fibres																															
	(g)	Installations for the manufacture of ceramic products by firing, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain																															
4		**Chemical industry**																															
	(a)	Chemical installations for the production on an industrial scale of basic organic chemicals																															
	(b)	Chemical installations for the production on an industrial scale of basic inorganic chemicals																															
	(c)	Chemical installations for the production on an industrial scale of phosphorous-, nitrogen- or potassium-based fertilizers (simple or compound fertilizers)																															
	(d)	Chemical installations for the production on an industrial scale of basic plant health products and of biocides																															
	(e)	Installations using a chemical or biological process for the production on an industrial scale of basic pharmaceutical products																															
	(f)	Installations for the production on an industrial scale of explosives and pyrotechnic products																															

Pollutant no			42	44	45	46	47	48	49	50	52	53	54	55	56	57	58	59	60	61	62	66	68	70	72	80	81	84	85	86	90
Pollutant Name			Hexachlorobenzene (HCB)	1,2,3,4,5, 6 - hexachlorocyclohexane (HCH)	Lindane	Mirex	PCDD + PCDF (dioxins + furans) (as Teq)	Pentachlorobenzene	Pentachlorophenol (PCP)	Polychlorinated biphenyls (PCBs)	Tetrachloroethylene (PER)	Tetrachloromethane (TCM)	Trichlorobenzenes (TCBs) (all isomers)	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	Trichloroethylene	Trichloromethane	Toxaphene	Vinyl chloride	Anthracene	Benzene	Ethylene oxide	Naphthalene	Di-(2-ethyl hexyl) phthalate (DEHP)	Polycyclic aromatic hydrocarbons (PAHs)	Chlorine and inorganic compounds (as HCl)	Asbestos	Fluorine and inorganic compounds (as HF)	Hydrogen cyanide (HCN)	Particulate matter (PM10)	Hexabromobiphenyl
3		**Mineral industry**																													
	(a)	Underground mining and related operations																													
	(b)	Opencast mining and quarrying																													
	(c)	Installations for the production of cement clinker in rotary kilns, lime in rotary kilns, cement clinker or lime in other furnaces																													
	(d)	Installations for the production of asbestos and the manufacture of asbestos-based products																													
	(e)	Installations for the manufacture of glass, including glass fibre																													
	(f)	Installations for melting mineral substances, including the production of mineral fibres																													
	(g)	Installations for the manufacture of ceramic products by firing, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain																													
4		**Chemical industry**																													
	(a)	Chemical installations for the production on an industrial scale of basic organic chemicals																													
	(b)	Chemical installations for the production on an industrial scale of basic inorganic chemicals																													
	(c)	Chemical installations for the production on an industrial scale of phosphorous-, nitrogen- or potassium-based fertilizers (simple or compound fertilizers)																													
	(d)	Chemical installations for the production on an industrial scale of basic plant health products and of biocides																													
	(e)	Installations using a chemical or biological process for the production on an industrial scale of basic pharmaceutical products																													
	(f)	Installations for the production on an industrial scale of explosives and pyrotechnic products																													

Pollutant no			1	2	3	4	5	6	7	8	9	10	11	14	15	16	17	18	19	20	21	22	23	24	26	28	29	33	34	35	36	39	41
Pollutant Name			Methane (CH_4)	Carbon monoxide (CO)	Carbon dioxide (CO_2)	Hydro-fluorocarbons (HFCs)	Nitrous oxide (N_2O)	Ammonia (NH_3)	Non-methane volatile organic compounds (NMVOC)	Nitrogen oxides (NO_X/NO_2)	Perfluorocarbons (PFCs)	Sulphur hexafluoride (SF_6)	Sulphur oxides (SO_X/SO_2)	Hydrochlorofluorocarbons (HCFCs)	Chlorofluorocarbons (CFCs)	Halons	Arsenic and compounds (as As)	Cadmium and compounds (as Cd)	Chromium and compounds(as Cr)	Copper and compounds (as Cu)	Mercury and compounds (as Hg)	Nickel and compounds (as Ni)	Lead and compounds (as Pb)	Zinc and compounds (as Zn)	Aldrin	Chlordane	Chlordecone	DDT	1,2-dichloroethane (EDC)	Dichloromethane (DCM)	Dieldrin	Endrin	Heptachlor
5		**Waste and wastewater management**																															
	(a)	Installations for the disposal or recovery of hazardous waste																															
	(b)	Installations for the incineration of non-hazardous waste in the scope of Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste (2)																															
	(c)	Installations for the disposal of non-hazardous waste																															
	(d)	Landfills (excluding landfills for inert waste and landfills, which have been definitely closed before the 16.7.2001 or for which the after-care phase required by the competent authorities according to Article 13 of Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste (3) has expired)																															
	(e)	Installations for the disposal or recycling of animal carcasses and animal waste																															
	(f)	Urban waste-water treatment plants																															
	(g)	Independently operated industrial waste-water treatment plants which serve one or more activities of this annex																															
6		**Paper and wood production and processing**																															
	(a)	Industrial plants for the production of pulp from timber or similar fibrous materials																															
	(b)	Industrial plants for the production of paper and board and other primary wood products (such as chipboard, fibreboard and plywood)																															
	(c)	Industrial plants for the preservation of wood and wood products with chemicals																															
7		**Intensive livestock production and aquaculture**																															
	(a)	Installations for the intensive rearing of poultry or pigs																															
	(b)	Intensive aquaculture																															

Pollutant no			42	44	45	46	47	48	49	50	52	53	54	55	56	57	58	59	60	61	62	66	68	70	72	80	81	84	85	86	90
Pollutant Name			Hexachlorobenzene (HCB)	1,2,3,4,5, 6 - hexachlorocyclohexane (HCH)	Lindane	Mirex	PCDD + PCDF (dioxins + furans) (as Teq)	Pentachlorobenzene	Pentachlorophenol (PCP)	Polychlorinated biphenyls (PCBs)	Tetrachloroethylene (PER)	Tetrachloromethane (TCM)	Trichlorobenzenes (TCBs) (all isomers)	1.1.1-trichloroethane	1,1,2,2-tetrachloroethane	Trichloroethylene	Trichloromethane	Toxaphene	Vinyl chloride	Anthracene	Benzene	Ethylene oxide	Naphthalene	Di-(2-ethyl hexyl) phthalate (DEHP)	Polycyclic aromatic hydrocarbons (PAHs)	Chlorine and inorganic compounds (as HCl)	Asbestos	Fluorine and inorganic compounds (as HF)	Hydrogen cyanide (HCN)	Particulate matter (PM10)	Hexabromobiphenyl
5		**Waste and wastewater management**																													
	(a)	Installations for the disposal or recovery of hazardous waste																													
	(b)	Installations for the incineration of non-hazardous waste in the scope of Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste (2)																													
	(c)	Installations for the disposal of non-hazardous waste																													
	(d)	Landfills (excluding landfills for inert waste and landfills, which have been definitely closed before the 16.7.2001 or for which the after-care phase required by the competent authorities according to Article 13 of Council Directive1999/31/EC of 26 April 1999 on the landfill of waste (3) has expired)																													
	(e)	Installations for the disposal or recycling of animal carcasses and animal waste																													
	(f)	Urban waste-water treatment plants																													
	(g)	Independently operated industrial waste-water treatment plants which serve one or more activities of this annex																													
6		**Paper and wood production and processing**																													
	(a)	Industrial plants for the production of pulp from timber or similar fibrous materials																													
	(b)	Industrial plants for the production of paper and board and other primary wood products (such as chipboard, fibreboard and plywood)																													
	(c)	Industrial plants for the preservation of wood and wood products with chemicals																													
7		**Intensive livestock production and aquaculture**																													
	(a)	Installations for the intensive rearing of poultry or pigs																													
	(b)	Intensive aquaculture																													

Pollutant no			1	2	3	4	5	6	7	8	9	10	11	14	15	16	17	18	19	20	21	22	23	24	26	28	29	33	34	35	36	39	41
Pollutant Name			Methane (CH_4)	Carbon monoxide (CO)	Carbon dioxide (CO_2)	Hydro-fluorocarbons (HFCs)	Nitrous oxide (N_2O)	Ammonia (NH_3)	Non-methane volatile organic compounds (NMVOC)	Nitrogen oxides (NO_X/NO_2)	Perfluorocarbons (PFCs)	Sulphur hexafluoride (SF_6)	Sulphur oxides (SO_X/SO_2)	Hydrochlorofluorocarbons (HCFCs)	Chlorofluorocarbons (CFCs)	Halons	Arsenic and compounds (as As)	Cadmium and compounds (as Cd)	Chromium and compounds(as Cr)	Copper and compounds (as Cu)	Mercury and compounds (as Hg)	Nickel and compounds (as Ni)	Lead and compounds (as Pb)	Zinc and compounds (as Zn)	Aldrin	Chlordane	Chlordecone	DDT	1,2-dichloroethane (EDC)	Dichloromethane (DCM)	Dieldrin	Endrin	Heptachlor
8		**Animal and vegetable products from the food and beverage sector**																															
	(a)	Slaughterhouses																															
	(b)	Treatment and processing intended for the production of food and beverage products from animal raw materials (other than milk) and vegetable raw materials																															
	(c)	Treatment and processing of milk																															
9		**Other activities**																															
	(a)	Plants for the pretreatment (operations such as washing, bleaching, mercerization) or dyeing of fibres or textiles																															
	(b)	Plants for the tanning of hides and skins																															
	(c)	Installations for the surface treatment of substances, objects or products using organic solvents, in particular for dressing, printing, coating, degreasing, waterproofing, sizing, painting, cleaning or impregnating																															
	(d)	Installations for the production of carbon (hard-burnt coal) or electro-graphite by means of incineration or graphitization																															
	(e)	Installations for the building of, and painting or removal of paint from ships																															

Pollutant no			42	44	45	46	47	48	49	50	52	53	54	55	56	57	58	59	60	61	62	66	68	70	72	80	81	84	85	86	90
Pollutant Name			Hexachlorobenzene (HCB)	1,2,3,4,5, 6 - hexachlorocyclohexane (HCH)	Lindane	Mirex	PCDD + PCDF (dioxins + furans) (as Teq)	Pentachlorobenzene	Pentachlorophenol (PCP)	Polychlorinated biphenyls (PCBs)	Tetrachloroethylene (PER)	Tetrachloromethane (TCM)	Trichlorobenzenes (TCBs) (all isomers)	1,1,1-trichloroethane	1,1,2,2-tetrachloroethane	Trichloroethylene	Trichloromethane	Toxaphene	Vinyl chloride	Anthracene	Benzene	Ethylene oxide	Naphthalene	Di-(2-ethyl hexyl) phthalate (DEHP)	Polycyclic aromatic hydrocarbons (PAHs)	Chlorine and inorganic compounds (as HCl)	Asbestos	Fluorine and inorganic compounds (as HF)	Hydrogen cyanide (HCN)	Particulate matter (PM10)	Hexabromobiphenyl
8		**Animal and vegetable products from the food and beverage sector**																													
	(a)	Slaughterhouses																													
	(b)	Treatment and processing intended for the production of food and beverage products from animal raw materials (other than milk) and vegetable raw materials																													
	(c)	Treatment and processing of milk																													
9		**Other activities**																													
	(a)	Plants for the pretreatment (operations such as washing, bleaching, mercerization) or dyeing of fibres or textiles																													
	(b)	Plants for the tanning of hides and skins																													
	(c)	Installations for the surface treatment of substances, objects or products using organic solvents, in particular for dressing, printing, coating, degreasing, waterproofing, sizing, painting, cleaning or impregnating																													
	(d)	Installations for the production of carbon (hard-burnt coal) or electro-graphite by means of incineration or graphitization																													
	(e)	Installations for the building of, and painting or removal of paint from ships																													

APPENDIX II INDICATIVE SECTOR SPECIFIC SUB-LIST OF WATER POLLUTANTS

Pollutant no			12	13	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Pollutant Name			Total nitrogen	Total phosphorus	Arsenic and compounds (as As)	Cadmium and compounds (as Cd)	Chromium and compounds(as Cr)	Copper and compounds (as Cu)	Mercury and compounds (as Hg)	Nickel and compounds (as Ni)	Lead and compounds (as Pb)	Zinc and compounds (as Zn)	Alachlor	Aldrin	Atrazine	Chlordane	Chlordecone	Chlorfenvinphos	Chloro-alkanes, C 10-C13	Chlorpyrifos	DDT	1,2-dichloroethane (EDC)	Dichloromethane (DCM)	Dieldrin	Diuron	Endosulphan	Endrin	Halogenated organic compounds (as AOX)	Heptachlor	Hexachlorobenzene (HCB)	Hexachlorobutadiene (HCBD)	1,2,3,4,5, 6 - hexachlorocyclohexane (HCH)	Lindane	Mirex	PCDD + PCDF (dioxins + furans) (as Teq)	Pentachlorobenzene	Pentachlorophenol (PCP)	Polychlorinated biphenyls (PCBs)
1		**Energy sector**																																				
	(a)	Mineral oil and gas refineries																																				
	(b)	Installations for gasification and liquefaction																																				
	(c)	Thermal power stations and other combustion installations																																				
	(d)	Coke ovens																																				
	(e)	Coal rolling mills																																				
	(f)	Installations for the manufacture of coal products and solid smokeless fuel																																				
2		**Production and processing of metals**																																				
	(a)	Metal ore (including sulphide ore) roasting or sintering installations																																				
	(b)	Installations for the production of pig iron or steel (primary or secondary melting) including continuous casting																																				
	(c)	Installations for the processing of ferrous metals																																				
	(d)	Ferrous metal foundries																																				
	(e)	Installations for production of non-ferrous crude metals from ore, concentrates or secondary raw materials by metallurgical, chemical or electrolytic processes and for the smelting, including the alloying, of non-ferrous metals, including recovered products (refining, foundry casting, etc.)																																				
	(f)	Installations for surface treatment of metals and plastic materials using an electrolytic or chemical process																																				

Pollutant no			51	52	53	54	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	81	82	83	87	88	89	90	91
Pollutant Name			Simazine	Tetrachloroethylene (PER)	Tetrachloromethane (TCM)	Trichlorobenzenes (TCBs) (all isomers)	Trichloroethylene	Trichloromethane	Toxaphene	Vinyl chloride	Anthracene	Benzene	Brominated diphenylethers (PBDE)	Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)	Ethyl benzene	Ethylene oxide	Isoproturon	Naphthalene	Organotin compounds (as total Sn)	Di-(2-ethyl hexyl) phthalate (DEHP)	Phenols (as total C)	Polycyclic aromatic hydrocarbons (PAHs)	Toluene	Tributyltin and compounds	Triphenyltin and compounds	Total organic carbon (TOC) (as total C or COD/3)	Trifluralin	Xylenes	Chlorides (as total Cl)	Asbestos	Cyanides (as total CN)	Fluorides (as total F)	Octylphenols and Octylphenol Ethoxylates	Fluoranthene	Isodrin	Hexabromobiphenyl	Benzo(g.h.i)perylene
1		**Energy sector**																																			
	(a)	Mineral oil and gas refineries																																			
	(b)	Installations for gasification and liquefaction																																			
	(c)	Thermal power stations and other combustion installations																																			
	(d)	Coke ovens																																			
	(e)	Coal rolling mills																																			
	(f)	Installations for the manufacture of coal products and solid smokeless fuel																																			
2		**Production and processing of metals**																																			
	(a)	Metal ore (including sulphide ore) roasting or sintering installations																																			
	(b)	Installations for the production of pig iron or steel (primary or secondary melting) including continuous casting																																			
	(c)	Installations for the processing of ferrous metals																																			
	(d)	Ferrous metal foundries																																			
	(e)	Installations for the production of non-ferrous crude metals from ore, concentrates or secondary raw materials by metallurgical, chemical or electrolytic processes and for the smelting, including the alloying, of non-ferrous metals, including recovered products (refining, foundry casting, etc.)																																			
	(f)	Installations for surface treatment of metals and plastic materials using an electrolytic or chemical process																																			

Pollutant no			12	13	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Pollutant Name			Total nitrogen	Total phosphorus	Arsenic and compounds (as As)	Cadmium and compounds (as Cd)	Chromium and compounds(as Cr)	Copper and compounds (as Cu)	Mercury and compounds (as Hg)	Nickel and compounds (as Ni)	Lead and compounds (as Pb)	Zinc and compounds (as Zn)	Alachlor	Aldrin	Atrazine	Chlordane	Chlordecone	Chlorfenvinphos	Chloro-alkanes, C 10-C13	Chlorpyrifos	DDT	1,2-dichloroethane (EDC)	Dichloromethane (DCM)	Dieldrin	Diuron	Endosulphan	Endrin	Halogenated organic compounds (as AOX)	Heptachlor	Hexachlorobenzene (HCB)	Hexachlorobutadiene (HCBD)	1,2,3,4,5, 6 - hexachlorocyclohexane (HCH)	Lindane	Mirex	PCDD + PCDF (dioxins + furans) (as Teq)	Pentachlorobenzene	Pentachlorophenol (PCP)	Polychlorinated biphenyls (PCBs)
3		**Mineral industry**																																				
	(a)	Underground mining and related operations																																				
	(b)	Opencast mining and quarrying																																				
	(c)	Installations for the production of cement clinker in rotary kilns, lime in rotary kilns, cement clinker or lime in other furnaces																																				
	(d)	Installations for the production of asbestos and the manufacture of asbestos-based products																																				
	(e)	Installations for the manufacture of glass, including glass fibre																																				
	(f)	Installations for melting mineral substances, including the production of mineral fibres																																				
	(g)	Installations for the manufacture of ceramic products by firing, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain																																				
4		**Chemical industry**																																				
	(a)	Chemical installations for the production on an industrial scale of basic organic chemicals																																				
	(b)	Chemical installations for the production on an industrial scale of basic inorganic chemicals																																				
	(c)	Chemical installations for the production on an industrial scale of phosphorous-, nitrogen- or potassium-based fertilizers (simple or compound)																																				
	(d)	Chemical installations for the production on an industrial scale of basic plant health products and of biocides																																				
	(e)	Installations using a chemical or biological process for the production on an industrial scale of basic pharmaceutical products																																				
	(f)	Installations for the production on an industrial scale of explosives and pyrotechnic products																																				

Pollutant no			51	52	53	54	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	81	82	83	87	88	89	90	91
Pollutant Name			Simazine	Tetrachloroethylene (PER)	Tetrachloromethane (TCM)	Trichlorobenzenes (TCBs) (all isomers)	Trichloroethylene	Trichloromethane	Toxaphene	Vinyl chloride	Anthracene	Benzene	Brominated diphenylethers (PBDE)	Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)	Ethyl benzene	Ethylene oxide	Isoproturon	Naphthalene	Organotin compounds (as total Sn)	Di-(2-ethyl hexyl) phthalate (DEHP)	Phenols (as total C)	Polycyclic aromatic hydrocarbons (PAHs)	Toluene	Tributyltin and compounds	Triphenyltin and compounds	Total organic carbon (TOC) (as total C or COD/3)	Trifluralin	Xylenes	Chlorides (as total Cl)	Asbestos	Cyanides (as total CN)	Fluorides (as total F)	Octylphenols and Octylphenol Ethoxylates	Fluoranthene	Isodrin	Hexabromobiphenyl	Benzo(g.h.i)perylene
3		**Mineral industry**																																			
	(a)	Underground mining and related operations																																			
	(b)	Opencast mining and quarrying																																			
	(c)	Installations for the production of cement clinker in rotary kilns, lime in rotary kilns, cement clinker or lime in other furnaces																																			
	(d)	Installations for the production of asbestos and the manufacture of asbestos-based products																																			
	(e)	Installations for the manufacture of glass, including glass fibre																																			
	(f)	Installations for melting mineral substances, including the production of mineral fibres																																			
	(g)	Installations for the manufacture of ceramic products by firing, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain																																			
4		**Chemical industry**																																			
	(a)	Chemical installations for the production on an industrial scale of basic organic chemicals																																			
	(b)	Chemical installations for the production on an industrial scale of basic inorganic chemicals																																			
	(c)	Chemical installations for the production on an industrial scale of phosphorous-, nitrogen- or potassium-based fertilizers (simple or compound)																																			
	(d)	Chem. installations for the prod.on an ind.scale of basic plant health products and of biocides																																			
	(e)	Installations using a chemical or biological process for the production on an industrial scale of basic pharmaceutical products																																			
	(f)	Installations for the production on an industrial scale of explosives and pyrotechnic products																																			

Pollutant no			12	13	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Pollutant Name			Total nitrogen	Total phosphorus	Arsenic and compounds (as As)	Cadmium and compounds (as Cd)	Chromium and compounds(as Cr)	Copper and compounds (as Cu)	Mercury and compounds (as Hg)	Nickel and compounds (as Ni)	Lead and compounds (as Pb)	Zinc and compounds (as Zn)	Alachlor	Aldrin	Atrazine	Chlordane	Chlordecone	Chlorfenvinphos	Chloro-alkanes, C 10-C13	Chlorpyrifos	DDT	1,2-dichloroethane (EDC)	Dichloromethane (DCM)	Dieldrin	Diuron	Endosulphan	Endrin	Halogenated organic compounds (as AOX)	Heptachlor	Hexachlorobenzene (HCB)	Hexachlorobutadiene (HCBD)	1,2,3,4,5, 6 - hexachlorocyclohexane (HCH)	Lindane	Mirex	PCDD + PCDF (dioxins + furans) (as Teq)	Pentachlorobenzene	Pentachlorophenol (PCP)	Polychlorinated biphenyls (PCBs)
5		**Waste and wastewater management**																																				
	(a)	Installations for the disposal or recovery of hazardous waste																																				
	(b)	Install. for the incineration of non-hazardous waste in the scope of Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste (2)																																				
	(c)	Installations for the disposal of non-hazardous waste																																				
	(d)	Landfills (excluding landfills of inert waste and landfills, which have been definitely closed before the 16.7.2001 or for which the after-care phase required by the competent authorities according to Article 13 of Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste (3) has expired)																																				
	(e)	Installations for the disposal or recycling of animal carcasses and animal waste																																				
	(f)	Urban waste-water treatment plants																																				
	(g)	Independently operated industrial waste-water treatment plants which serve one or more activities of this annex																																				
6		**Paper and wood production and processing**																																				
	(a)	Industrial plants for the production of pulp from timber or similar fibrous materials																																				
	(b)	Industrial plants for the production of paper and board and other primary wood products (such as chipboard, fibreboard and plywood)																																				
	(c)	Industrial plants for the preservation of wood and wood products with chemicals																																				
7		**Intensive livestock production and aquaculture**																																				
	(a)	Install. for the intensive rearing of poultry or pigs																																				
	(b)	Intensive aquaculture																																				

Pollutant no			51	52	53	54	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	81	82	83	87	88	89	90	91
Pollutant Name			Simazine	Tetrachloroethylene (PER)	Tetrachloromethane (TCM)	Trichlorobenzenes (TCBs) (all isomers)	Trichloroethylene	Trichloromethane	Toxaphene	Vinyl chloride	Anthracene	Benzene	Brominated diphenylethers (PBDE)	Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)	Ethyl benzene	Ethylene oxide	Isoproturon	Naphthalene	Organotin compounds (as total Sn)	Di-(2-ethyl hexyl) phthalate (DEHP)	Phenols (as total C)	Polycyclic aromatic hydrocarbons (PAHs)	Toluene	Tributyltin and compounds	Triphenyltin and compounds	Total organic carbon (TOC) (as total C or COD/3)	Trifluralin	Xylenes	Chlorides (as total Cl)	Asbestos	Cyanides (as total CN)	Fluorides (as total F)	Octylphenols and Octylphenol Ethoxylates	Fluoranthene	Isodrin	Hexabromobiphenyl	Benzo(g,h,i)perylene
5		**Waste and wastewater management**																																			
	(a)	Installations for the disposal or recovery of hazardous waste																																			
	(b)	Installations for the incineration of non-hazardous waste in the scope of Directive 2000/76/EC of the European Parliament and of the Council of 4 December 2000 on the incineration of waste (2)																																			
	(c)	Install. for the disposal of non-hazardous waste																																			
	(d)	Landfills (excluding landfills of inert waste and landfills, which have been definitely closed before the 16.7.2001 for for which the after-care phase required by the competent authorities according to Article 13 of Council Directive 1999/31/EC of 26 April 1999 on the landfill of waste (3) has expired)																																			
	(e)	Installations for the disposal or recycling of animal carcasses and animal waste																																			
	(f)	Urban waste-water treatment plants																																			
	(g)	Independently operated industrial waste-water treatment plants which serve one or more activities of this annex																																			
6		**Paper and wood production and processing**																																			
	(a)	Industrial plants for the production of pulp from timber or similar fibrous materials																																			
	(b)	Industrial plants for the production of paper and board and other primary wood products (such as chipboard, fibreboard and plywood)																																			
	(c)	Industrial plants for the preservation of wood and wood products with chemicals																																			
7		**Intensive livestock production and aquaculture**																																			
	(a)	Installations for the intensive rearing of poultry or pigs																																			
	(b)	Intensive aquaculture																																			

Pollutant no			12	13	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
Pollutant Name			Total nitrogen	Total phosphorus	Arsenic and compounds (as As)	Cadmium and compounds (as Cd)	Chromium and compounds(as Cr)	Copper and compounds (as Cu)	Mercury and compounds (as Hg)	Nickel and compounds (as Ni)	Lead and compounds (as Pb)	Zinc and compounds (as Zn)	Alachlor	Aldrin	Atrazine	Chlordane	Chlordecone	Chlorfenvinphos	Chloro-alkanes, C 10-C13	Chlorpyrifos	DDT	1,2-dichloroethane (EDC)	Dichloromethane (DCM)	Dieldrin	Diuron	Endosulphan	Endrin	Halogenated organic compounds (as AOX)	Heptachlor	Hexachlorobenzene (HCB)	Hexachlorobutadiene (HCBD)	1,2,3,4,5, 6 - hexachlorocyclohexane (HCH)	Lindane	Mirex	PCDD + PCDF (dioxins + furans) (as Teq)	Pentachlorobenzene	Pentachlorophenol (PCP)	Polychlorinated biphenyls (PCBs)
8		**Animal and vegetable products from the food and beverage sector**																																				
	(a)	Slaughterhouses																																				
	(b)	Treatment and processing intended for the production of food and beverage products from animal raw materials (other than milk) and vegetable raw materials																																				
	(c)	Treatment and processing of milk																																				
9		**Other activities**																																				
	(a)	Plants for the pretreatment (operations such as washing, bleaching, mercerization) or dyeing of fibres or textiles																																				
	(b)	Plants for the tanning of hides and skins																																				
	(c)	Installations for the surface treatment of substances, objects or products using organic solvents, in particular for dressing, printing, coating, degreasing, waterproofing, sizing, painting, cleaning or impregnating																																				
	(d)	Installations for the production of carbon (hard-burnt coal) or electro-graphite by means of incineration or graphitization																																				
	(e)	Installations for the building of, and painting or removal of paint from ships																																				

Pollutant no			51	52	53	54	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	81	82	83	87	88	89	90	91
Pollutant Name			Simazine	Tetrachloroethylene (PER)	Tetrachloromethane (TCM)	Trichlorobenzenes (TCBs) (all isomers)	Trichloroethylene	Trichloromethane	Toxaphene	Vinyl chloride	Anthracene	Benzene	Brominated diphenylethers (PBDE)	Nonylphenol and Nonylphenol ethoxylates (NP/NPEs)	Ethyl benzene	Ethylene oxide	Isoproturon	Naphthalene	Organotin compounds (as total Sn)	Di-(2-ethyl hexyl) phthalate (DEHP)	Phenols (as total C)	Polycyclic aromatic hydrocarbons (PAHs)	Toluene	Tributyltin and compounds	Triphenyltin and compounds	Total organic carbon (TOC) (as total C or COD/3)	Trifluralin	Xylenes	Chlorides (as total Cl)	Asbestos	Cyanides (as total CN)	Fluorides (as total F)	Octylphenols and Octylphenol Ethoxylates	Fluoranthene	Isodrin	Hexabromobiphenyl	Benzo(g,h,i)perylene
8		**Animal and vegetable products from the food and beverage sector**																																			
	(a)	Slaughterhouses																																			
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	(a)	Plants for the pretreatment (operations such as washing, bleaching, mercerization) or dyeing of fibres or textiles																																			
	(b)	Plants for the tanning of hides and skins																																			
	(c)	Installations for the surface treatment of substances, objects or products using organic solvents, in particular for dressing, printing, coating, degreasing, waterproofing, sizing, painting, cleaning or impregnating																																			
	(d)	Installations for the production of carbon (hard-burnt coal) or electro-graphite by means of incineration or graphitization																																			
	(e)	Installations for the building of, and painting or removal of paint from ships																																			

APPENDIX III COMMON CONVERSION CALCULATIONS AND EXAMPLES

1. CONVERT GAS QUANTITIES

To convert normalised gas quantities from **m^3/year** to **kg/year**, the **gas density** has to be multiplied by the **volume.** Each gas has a different density, which is specified on the MSDS sheets or other manufacturers information.

m^3/year to kg/ year

=

m^3/year x gas density = kg/ year

Example

methane density = 0.68 3,000m^3/year x 0.68 = 2,040 kg/ year methane

2. CALCULATE MASS FLOW: MG/M³ ⍰ KG/YR

To convert a normalised gas or liquid spot sample results in **mg/m^3** to the required Annual Mass Flow in **kg/year**, the concentration in **mg/m^3** has to be multiplied by a flow rate in **m^3/hr**.

$$\frac{\text{Conc x hourly rate}}{1{,}000{,}000} = \text{mass flow kg/hr x 8760 (hrs per year)} = \text{mass flow kg/yr}$$

Example

$$\frac{150\ mg/m^3 \times 4000\ m^3/hr}{1{,}000{,}000} = 0.6\ kg/hr \times 8760 = 5{,}256\ kg/yr$$

3. CALCULATE MASS FLOW: MG/LITRE ⍰ KG/YR

In order to convert a liquid spot sample result (mg/litre) to the required Annual Mass Flow in **kg/year** the concentration in **mg/litre** has to be multiplied by a volume in **litres/day**.

Conc x litres/day
1,000,000

=

mass flow kg/day x 365 (days per year)

=

mass flow kg/yr

Example

20 mg/litres x 5000 litres/day = 100 kg/day x 365 = 36,500 kg/yr
1,000

4. CONVERSION AND DATA INPUT EXERCISES

Releases to air

Carbon dioxide – total: 17,000 m^3/year ((17,000 x **1.97-gas density)**

= **33490.00 kg/year)**

Emission point 1: 8,360 m^3/year (16,469.20 kg/year)

Emission point 2: 5,641 m^3/year (11,112.77kg/year)

Emission point 3: 2,999 m^3/year (5908.03 kg/year)

Methane – total: 17,000 m^3/year (17,000 x **0.68-gas density)**

= 11560.00 kg/year)

Background load of cooling water

total nitrogen

In: 37,560 mg/m^3

Out: 96,430 mg/m^3

Difference: **58,870 mg/m^3**

Flow rate = 200m^3/hour

Conc x hourly rate = mass flow kg/hr x 8760 (hrs per year) = mass flow kg/yr
1,000,000

Multiply 58,870 **mg/m^3** by 200 m^3/hour divide by 1,000,000 =

11.7kg/hour x 8760 hours of discharge = **102,492 kg/year**

APPENDIX IV LIST OF INTERNATIONALLY APPROVED MEASURING METHODS FOR AIR AND WATER POLLUTANTS

NOTE - The different steps of these measurement methods (sampling, transport and storage, pre-treatment, extraction, analysis- quantification, reporting) are standardised in one or several standards. For releases to air the quoted standards generally cover all steps of the measurement methods. For releases to water, the quoted standards generally cover the analysis-quantification step. Guidance on the other steps is provided in "general standards (G1-G7)" listed at the end of this table; they also include standards (G6, G7) on issues such as competence of laboratories, uncertainties, etc.

The absence of CEN or ISO standards in this table does not mean always a lack of relevant procedures, for instance work on such topics may be in progress in CEN or ISO.

No.	CAS number	Pollutant	EN or ISO standard Emission to air	EN or ISO standard Emission to water
1	74-82-8	Methane (CH_4)	ISO Standard in preparation by ISO/TC 146/SC 1/ WG 22 (for information only)	---
2	630-08-0	Carbon monoxide (CO)	EN 15058:2004 ISO 12039:2001	---
3	124-38-9	Carbon dioxide (CO_2)	ISO 12039:2001	---
4		Hydro-fluorocarbons (HFCs)		---
5	10024-97-2	Nitrous oxide (N_2O)	ISO Standard in preparation by ISO/TC 146/SC 1/ WG 19 (for information only)	---
6	7664-41-7	Ammonia (NH_3)		---
7		Non-methane volatile organic compounds (NMVOC)	EN 13649:2001	---
8		Nitrogen oxides (NO_X/NO_2)	EN 14792:2005 ISO 11564:1998 ISO 10849:1996	---
9		Perfluorocarbons (PFCs)		---

No.	CAS number	Pollutant	EN or ISO standard Emission to air	EN or ISO standard Emission to water
10	2551-62-4	Sulphur hexafluoride (SF_6)		---
11		Sulphur oxides (SO_x/SO_2)	EN 14791:2005 ISO 7934:1989 ISO 7935:1992 ISO 11632:1998	---
12		Total nitrogen	---	EN 12260:2003 EN ISO 11905-1:1998
13		Total phosphorus	---	EN ISO 15681-1:2004 EN ISO 15681-2:2004 EN ISO 11885:1997 EN ISO 6878:2004
14		Hydrochlorofluorocarbons (HCFCs)		---
15		Chlorofluorocarbons (CFCs)		---
16		Halons		---
17		*Arsenic* and compounds (as As)	EN 14385:2004	EN ISO 11969:1996 EN 26595:1992
18		*Cadmium* and compounds (as Cd)	EN 14385:2004	EN ISO 5961:1995 EN ISO 11885:1997
19		*Chromium* and compounds (as Cr)	EN 14385:2004	EN 1233:1996 EN ISO 11885:1997
20		*Copper* and compounds (as Cu)	EN 14385:2004	EN ISO 11885:1997
21		*Mercury* and compounds (as Hg)	EN 13211:2001 EN 14884:2005	EN 1483:1997 EN 12338:1998 EN 13506:2001
22		*Nickel* and compounds (as Ni)	EN 14385:2004	EN ISO 11885:1997
23		*Lead* and compounds (as Pb)	EN 14385:2004	EN ISO 11885:1997

No.	CAS number	Pollutant	EN or ISO standard Emission to air	EN or ISO standard Emission to water
24		*Zinc* and compounds (as Zn)		EN ISO 11885:1997
25	15972-60-8	Alachlor	---	
26	309-00-2	Aldrin		EN ISO 6468:1996
27	1912-24-9	Atrazine	---	EN ISO 10695:2000
28	57-74-9	Chlordane		
29	143-50-0	Chlordecone		
30	470-90-6	Chlorfenvinphos	---	
31	85535-84-8	Chloro-alkanes, C_{10}-C_{13}	---	
32	2921-88-2	Chlorpyrifos	---	
33	50-29-3	DDT		EN ISO 6468:1996
34	107-06-2	1,2-dichloroethane (EDC)		EN ISO 10301:1997 EN ISO 15680:2003
35	75-09-2	Dichloromethane (DCM)		EN ISO 10301:1997 EN ISO 15680:2003
36	60-57-1	Dieldrin		EN ISO 6468:1996
37	330-54-1	Diuron	---	EN ISO 11369:1997
38	115-29-7	Endosulfan	---	EN ISO 6468:1996
39	72-20-8	Endrin		EN ISO 6468:1996
40		Halogenated organic compounds (as AOX)	---	EN ISO 9562:2004
41	76-44-8	Heptachlor		EN ISO 6468:1996
42	118-74-1	Hexachlorobenzene (HCB)		EN ISO 6468:1996
43	87-68-3	Hexachlorobutadiene (HCBD)	---	
44	608-73-1	1,2,3,4,5, 6 - hexachlorocyclohexane (HCH)		EN ISO 6468:1996
45	58-89-9	Lindane		EN ISO 6468:1996
46	2385-85-5	Mirex		

No.	CAS number	Pollutant	EN or ISO standard Emission to air	EN or ISO standard Emission to water
47		PCDD +PCDF (dioxins +furans) (as Teq)	EN 1948-1 to -3:2006	ISO 18073:2004
48	608-93-5	Pentachlorobenzene		EN ISO 6468:1996
49	87-86-5	Pentachlorophenol (PCP)		
50	*1336-36-3*	Polychlorinated biphenyls (PCBs)	(prCEN/TS 1948-4) for information only	EN ISO 6468:1996
51	*122-34-9*	Simazine	---	EN ISO 11369:1997 EN ISO 10695:2000
52	*127-18-4*	Tetrachloroethylene (PER)		EN ISO 15680:2003 EN ISO 10301:1997
53	*56-23-5*	Tetrachloromethane (TCM)		EN ISO 10301:1997
54	*12002-48-1*	Trichlorobenzenes (TCBs) *(all isomers)*		EN ISO 15680:2003
55	*71-55-6*	1,1,1-trichloroethane		---
56	*79-34-5*	1,1,2,2-tetrachloroethane		---
57	*79-01-6*	Trichloroethylene		EN ISO 15680:2003 EN ISO 10301:1997
58	*67-66-3*	Trichloromethane		EN ISO 15680:2003 EN ISO 10301:1997
59	*8001-35-2*	Toxaphene		
60	*75-01-4*	Vinyl chloride		EN ISO 15680:2003
61	*120-12-7*	Anthracene	ISO 11338-1 to -2:2003	EN ISO 17993:2003
62	*71-43-2*	Benzene	EN 13649:2001	ISO 11423-1:1997 ISO 11423-2:1997 EN ISO 15680:2003
63		Brominated diphenylethers (PBDE)	---	ISO/DIS 22032:2004
64		Nonylphenol *and Nonylphenol* ethoxylates *(NP/NPEs)*	---	

No.	CAS number	Pollutant	EN or ISO standard Emission to air	EN or ISO standard Emission to water
65	100-41-4	Ethyl benzene	---	EN ISO 15680:2003
66	75-21-8	Ethylene oxide		
67	34123-59-6	Isoproturon	---	
68	91-20-3	Naphthalene		EN ISO 15680:2003 EN ISO 17993:2003
69		Organotin compounds (as total Sn)	---	EN ISO 17353:2005
70	117-81-7	Di-(2-ethyl hexyl) phthalate (DEHP)		EN ISO 18856:2005
71	108-95-2	Phenols (as total C)	---	ISO 18857-1:2005
72		Polycyclic aromatic hydrocarbons (PAHs)	ISO 11338-1 to -2:2003	EN ISO 17993:2003 ISO 7981-1:2005 ISO 7981-2:2005
73	108-88-3	Toluene	---	EN ISO 15680:2003
74		Tributyltin and compounds	---	EN ISO 17353:2005
75		Triphenyltin and compounds	---	EN ISO 17353:2005
76		Total organic carbon (TOC) (as total C or COD/3)	---	EN 1484:1997
77	1582-09-8	Trifluralin	---	
78	1330-20-7	Xylenes	---	EN ISO 15680:2003
79		Chlorides (as total Cl)	---	EN ISO 10304-1:1995 EN ISO 10304-2:1996 EN ISO 10304-4:1999 EN ISO 15682:2001
80		Chlorine and inorganic compounds (as HCl)	EN 1911-1 to -3:2003	---
81	1332-21-4	Asbestos	ISO 10397:1993	
82		Cyanides (as total CN)	---	EN ISO 14403:2002

No.	CAS number	Pollutant	EN or ISO standard Emission to air	EN or ISO standard Emission to water
83		Fluorides (as total F)	---	EN ISO 10304-1:1995
84		Fluorine and inorganic compounds (as HF)	ISO/DIS 15713:2004	---
85	74-90-8	Hydrogen cyanide (HCN)		---
86		Particulate matter (PM10)	ISO Standard in preparation by ISO/TC 146/SC 1/ WG 20 (available as Committee Draft CD 23210)	---
87	1806-26-4	Octylphenols and Octylphenol ethoxylates	---	
88	206-44-0	Fluoranthene	ISO 11338-1 to -2:2003	EN ISO 17993:2003
89	465-73-6	Isodrin	---	
90	36355-1-8	Hexabromobiphenyl		
91	191-24-2	Benzo(g,h,i)perylene	---	EN ISO 17993:2003
		GENERAL STANDARDS for EMISSION to AIR and/or WATER		
G1	Water sampling – Part1 Guidance on the design of sampling programmes			EN ISO 5667-1:1996
G2	Water sampling – Part 10 Guidance on sampling waste water			EN ISO 5667-10:1992
G3	Water sampling – Part 3 Guidance on the preservation and handling of samples			EN ISO 5667-3:1994
G4	Guide to analytical quality control for water analysis			CEN/ISO TR 13530:1998
G5	Stationary source emission – Intralaboratory validation procedure for an alternative method compared to a reference method		CEN/TS 14793	
G6	General requirements for competence of testing and calibration laboratories			EN ISO 17025:2005

No.	CAS number	Pollutant	EN or ISO standard Emission to air	EN or ISO standard Emission to water
G7	GUM = Guide to the expression of uncertainty (1995) published by BIPM, IEC, IFCC, ISO, IUPAC, IUPAP, OIML			CEN TS 13005:2000

Abbreviations:

EN	European Standard
CEN/TS	CEN Technical Specification
CEN/TR	CEN Technical Report
ISO	International Standard ISO/CD ISO Committee Draft ISO/TS ISO Technical
"---"	no obligation to report under the European PRTR

Titles of Standards

EN (ISO) Standards

EN 1233:1996:	*Water quality - Determination of chromium - Atomic absorption spectrometric methods*
EN 1483:1997:	*Water quality - Determination of mercury*
EN 1484:1997:	*Water analysis - Guidelines for the determination of total organic carbon (TOC) and dissolved organic carbon (DOC)*
EN 1911-1:1998:	*Stationary source emissions - Manual method of determination of HCl - Part 1: Sampling of gases*
EN 1911-2:1998:	*Stationary source emissions - Manual method of determination of HCl - Part 2: Gaseous compounds absorption*
EN 1911-3:1998:	*Stationary source emissions - Manual method of determination of HCl - Part 3: Absorption solutions analysis and calculation*
EN 1948-1:2006:	*Stationary source emissions – Determination of the mass concentration of PCDDs/PCDFs and dioxin-like*
PCBs – Part 1:	*Sampling of PCDDs/PCDFs*
EN 1948-2:2006:	*Stationary source emissions – Determination of the mass concentration of PCDDs/PCDFs and dioxin-like* *PCBs – Part 2: Extraction and clean-up of PCDDs/PCDFs*
EN 1948-3:2006	*Stationary source emissions – Determination of the mass concentration of PCDDs/PCDFs and dioxin-like* *PCBs – Part 3: Identification and quantification of PCDDs/PCDFs*

prCEN/TS 1948-4	*Stationary source emissions -- Determination of the mass concentration of PCDD/PCDF and dioxin-like PCBs - Part 4: Sampling and analysis of dioxin-like PCBs*
EN 12260:2003:	*Water quality – Determination of nitrogen – Determination of bound nitrogen (TN_b), following oxidation to nitrogen oxides*
EN 12338:1998:	*Water quality – Determination of mercury – Methods after enrichment by amalgamation*
ENV 13005:1999:	*Guide to the expression of uncertainty in measurement*
EN 13211:2001:	*Air quality - Stationary source emissions - Manual method of determination of the concentration of total mercury*
EN 13506:2001:	*Water quality - Determination of mercury by atomic fluorescence spectrometry*
EN 13649:2001:	*Stationary source emissions - Determination of the mass concentration of individual gaseous organic compounds - Activated carbon and solvent desorption method*
EN 14385:2004:	*Stationary source emissions - Determination of the total emission of As, Cd, Cr, Co, Cu, Mn, Ni, Pb, Sb, TI and V*
EN 14791:2005:	*Stationary source emissions - Determination of mass concentration of sulphur dioxide - Reference method*
EN 14792:2005:	*Stationary source emissions – Determination of mass concentration of nitrogen oxides (NO_2) – Reference method: chemiluminescence*
CEN/TS 14793:2005:	*Stationary source emission - Intralaboratory validation procedure for an alternative method compared to a reference method*
EN 14884:2005:	*Air quality - Stationary source emissions - Determination of total mercury: Automated measuring systems*
EN 15058:2004:	*Stationary source emissions - Reference method for the determination of carbon monoxide in emission by means of the non-dispersive infrared method*
EN 26595:1992/AC:1992:	*Water quality; determination of total arsenic; silver diethyldithiocarbamate spectrophotometric method (ISO 6595:1982)*
EN ISO 5667-1:2005:	*Water quality - Sampling - Part 1: Guidance on the design of sampling programmes and sampling techniques (revision of ISO 5667-1:1980 and ISO 5667-2:1991)*
EN ISO 5667-3:2003:	*Water quality - Sampling - Part 3: Guidance on the preservation and handling of water samples*
EN ISO 5667-10:1992:	*Water quality; sampling; part 10: guidance on sampling of waste waters*
EN ISO 5961:1995:	*Water quality - Determination of cadmium by atomic absorption spectrometry*
EN ISO 6468:1996:	*Water quality - Determination of certain organochlorine insecticides,*

	polychlorinated biphenyls and chlorobenzenes - Gas-chromatographic method after liquid-liquid extraction
EN ISO 6878:2004:	*Water quality - Determination of phosphorus - Ammonium molybdate spectrometric method*
EN ISO 9562:2004:	*Water quality - Determination of adsorbable organically bound halogens (AOX)*
EN ISO 10301:1997:	*Water quality - Determination of highly volatile halogenated hydrocarbons - Gas-chromatographic methods*
EN ISO 10304-1:1995:	*Water quality - Determination of dissolved fluoride, chloride, nitrite, orthophosphate, bromide, nitrate and sulfate ions, using liquid chromatography of ions - Part 1: Method for water with low contamination*
EN ISO 10304-2:1996:	*Water quality - Determination of dissolved anions by liquid chromatography of ions - Part 2: Determination of bromide, chloride, nitrate, nitrite, orthophosphate and sulfate in waste water*
EN ISO 10304-4:1999:	*Water quality - Determination of dissolved anions by liquid chromatography of ions - Part 4: Determination of chlorate, chloride and chlorite in water with low contamination*
EN ISO 10695:2000:	*Water quality - Determination of selected organic nitrogen and phosphorus compounds - Gas chromatographic methods*
EN ISO 11369:1997:	*Water quality - Determination of selected plant treatment agents - Method using high performance liquid chromatography with UV detection after solid-liquid extraction*
EN ISO 11885:1997:	*Water quality - Determination of 33 elements by inductively coupled plasma atomic emission spectroscopy*
EN ISO 11905-1:1998:	*Water quality - Determination of nitrogen - Part 1: Method using oxidative digestion with peroxodisulfate*
EN ISO 11969:1996:	*Water quality - Determination of arsenic - Atomic absorption spectrometric method (hydride technique)*
ENV/ISO 13530:1998:	*Water quality - Guide to analytical quality control for water analysis*
EN ISO 14403:2002:	*Water quality - Determination of total cyanide and free cyanide by continuous flow analysis*
EN ISO 15680:2003:	*Water quality - Gas-chromatographic determination of a number of monocyclic aromatic hydrocarbons, naphthalene and several chlorinated compounds using purge-and-trap and thermal desorption*
EN ISO 15681-1:2004:	*Water quality - Determination of orthophosphate and total phosphorus contents by flow analysis (FIA and CFA) - Part 1: Method by flow injection analysis (FIA)*
EN ISO 15681-2:2004:	*Water quality - Determination of orthophosphate and total phosphorus contents by flow analysis (FIA and CFA) - Part 2: Method by continuous flow analysis (CFA)*

EN ISO 15682:2001:	*Water quality - Determination of chloride by flow analysis (CFA and FIA) and photometric or potentiometric detection*
EN ISO/IEC 17025:2005:	*General requirements for the competence of testing and calibration laboratories*
EN ISO 17353:2005:	*Water quality - Determination of selected organotin compounds - Gas chromatographic method*
EN ISO 17993:2003:	*Water quality - Determination of 15 polycyclic aromatic hydrocarbons (PAH) in water by HPLC with fluorescence detection after liquid-liquid extraction*
EN ISO 18856:2005:	*Water quality - Determination of selected phthalates using gas chromatography/mass spectrometry*

ISO Standards

ISO 7934:1989:	*Stationary source emissions - Determination of the mass concentration of sulfur dioxide, hydrogen peroxide/bariumperchlorate/Thorin method*
ISO 7935:1992:	*Stationary source emissions; determination of the mass concentration of sulfur dioxide; performance characteristics of automated measuring methods*
ISO 7981-1:2005:	*Water quality - Determination of polycyclic aromatic hydrocarbons (PAH) - Part 1: Determination of six PAH by high-performance thin-layer chromatography with fluorescence detection after liquid-liquid extraction*
ISO 7981-2:2005:	*Water quality - Determination of polycyclic aromatic hydrocarbons (PAH) - Part 2: Determination of six PAH by high-performance liquid chromatography with fluorescence detection after liquid-liquid extraction*
ISO 10397:1993:	*Stationary source emissions; determination of asbestos plant emissions; method by fibre count measurement*
ISO 10849:1996:	*Stationary source emissions - Determination of the mass concentration of nitrogen oxides - Performance characteristics of automated measuring systems*
ISO 11338-1:2003:	*Stationary source emissions - Determination of gas and particle-phase polycyclic aromatic hydrocarbons - Part 1: Sampling*
ISO 11338-2:2003:	*Stationary source emissions - Determination of gas and particle-phase polycyclic aromatic hydrocarbons - Part 2: Sample preparation, clean-up and determination*
ISO 11423-1:1997:	*Water quality - Determination of benzene and some derivatives - Part 1: Head-space gas chromatograhic method*
ISO 11423-2:1997:	*Water quality - Determination of benzene and some derivatives - Part 2: Method using extraction and gas chromatography*
ISO 11564:1998:	*Stationary source emissions - Determination of the mass concentration of nitrogen oxides - Naphthylethylenediamine photometric method*

ISO 11632:1998:	*Stationary source emissions - Determination of mass concentration of sulfur dioxide - Ion chromatography method*
ISO 12039:2001:	*Stationary source emissions - Determination of carbon monoxide, carbon dioxide and oxygen - Performance characteristics and calibration of automated measuring systems*
ISO/FDIS 15713:2006:	*Stationary source emissions - Sampling and determination of gaseous fluoride content*
ISO 18073:2004:	*Water quality - Determination of tetra- to octa-chlorinated dioxins and furans - Method using isotope dilution HRGC/HRMS*
ISO 18857-1:2005:	*Water quality - Determination of selected alkylphenols - Part 1: Method for non-filtered samples using liquid-liquid extraction and gas chromatography with mass selective detection*
ISO/DIS 22032:2004:	*Water quality - Determination of selected polybrominated diphenyl ethers in sediment and sewage sludge - Method using extraction and gas chromatography/mass spectrometry*
ISO/CD 23210:2005:	*Stationary source emissions — Determination of low PM10/PM2,5 mass concentration in flue gas by use of impactors*

APPENDIX V CALCULATION/ESTIMATION METHODS

NOTE: links as on 10/05/2012

1. INTERNATIONALLY APPROVED CALCULATION METHODS

Internationally approved calculation methods are described in the following information sources:

- The European Commission has established **Guidelines for the monitoring and reporting of greenhouse gas emissions under the Emission Trading Scheme**. The guidelines and related frequently asked questions can be found at the EU Environment website.

  http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32007D0589:EN:NOT

- The IPCC Guidelines provide methodologies for estimating anthropogenic emissions by sources (method name to be reported "IPCC"). The Reference Manual provides a compendium of information on methods for estimation of emissions for a broader range of greenhouse gases and a complete list of source types for each. It summarises a range of possible methods for many source types. It also provides summaries of the scientific basis for the inventory methods recommended and gives extensive references to the technical literature.
  http://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html

- The EMEP/EEA "EMEP/EEA Air Pollutant Emission Inventory Guidebook – 2009" provides a comprehensive guide to atmospheric emissions inventory methodology (method name to be reported "UNECE/EMEP"). Its intention is to support reporting under the UNECE Convention on Long-Range Transboundary Air Pollution and the EU directive on national emission ceilings. The Guidebook is a joint activity of UNECE/EMEP and the European Environment agency. The guidebook contains chapters for specific source sectors, where all available emission factors and emission calculation methods are collected. A Task Force maintains a working web site, where drafts for new chapters and modifications of existing ones are available.
  http://www.eea.europa.eu/publications/emep-eea-emission-inventory-guidebook-2009

In the case of off-site transfers of waste the calculation of the annual quantity of waste(s) may use factors agreed on international, national or sectoral level, which, for example, indicate the waste amount in relation to the material produced or the input of raw material.

2. OTHER INFORMATION ON RELEASE DETERMINATION METHODS

Other information on **release determination methods** can be found at the following information sources:

- The IPPC-document "Reference Document on the General Principles of Monitoring" contains a list of CEN-standards and pre-standards for determination of releases.
  http://www.ipcc-nggip.iges.or.jp/public/2006gl/index.html
- The United Nations Institute for Training and Research (UNITAR) provides support for the determination of releases. The document "Estimating Environmental Releases for Facility PRTR

Reporting, Introduction and Guide to Methods" gives an overview of the methods available to facilities to estimate their releases to air, water, and land. The document is not intended to be a complete guide but attempts to show how data already collected by facilities might be used. The document "Guidance for Facilities on PRTR Data Estimation and Reporting" supporting the determination of releases, can be found at the same source.
http://www2.unitar.org/cwm/publications/cbl/prtr/UNITAR.htm

- The website of the OECD "Resource Centre for PRTR Release Estimation Techniques" (RETs) provides a clearing-house of guidance manuals/documents of release estimation techniques for the principal pollutant release and transfer registries developed by OECD member countries. The manuals and documents include descriptive information on the sources of pollution and the pollutants that are released, as well as information on emission factors, mass balance methods, engineering calculations, and monitoring information.
  http://217.149.50.68/main_e.cfm
- The OECD/IPCC/IEA phase II development of the "Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories" (IPCC Guidelines) methodology for agricultural sources of N_2O (IPCC, 1997; Mosier et al., 1998) includes methodologies for calculating both direct and indirect emissions of N_2O related to agricultural production.
  http://www.ipcc-nggip.iges.or.jp/public/gp/english/
- WHO**:** World Health Organization

  Reference Guide to Emission Estimation Models for Pollutant Release and Transfer Registers
- Australian emission estimation technique handbooks are available on the Internet.
  http://www.npi.gov.au/publications/emission-estimation-technique/index.html
- The US EPA Office of Air Quality Planning & Standards maintains a comprehensive web site where all material on available emission factors and emission estimation methods in the United States can be viewed and, in many cases, downloaded. Below a number of useful products are listed.
  http://www.epa.gov/ttn/chief/
- The European oil companies association has prepared a report providing information on "Air pollutant emission estimation methods for E-PRTR reporting by refineries"
  http://www.concawe.be/content/default.asp?PageID=569

Specifically related to the determination of releases to water

The literature on establishing releases to water is much more limited than in the case of releases to air.

The OSPAR-Commission for Protection of the Marine Environment of the North- East Atlantic initiated the project "Harmonised Quantification and Reporting Procedures for Hazardous Substances (HARP)" which includes methods for release determination. In the "Monitoring and Assessment" section of the OSPAR homepage under "decision, recommendations and other agreements" (agreement section) one can find other guidelines adopted by OSPAR for the measurement and assessment of hazardous substances in and their releases to the marine environment.
http://www.klif.no/publikasjoner/kjemikalier/1789/ta1789.pdf

Specifically related to waste management (landfills)

For the determination of diffuse methane and carbon dioxide releases from landfills different calculation models exist which are generally used at the national level, e.g. first order degradation models such as:

- First order TNO model

  Oonk, J., A. Boom, 1995. Landfill gas formation, recovery and emissions. NOVEM Programme Energy Generation from Waste and Biomass (EWAB), TNO report R95-203, Apeldoorn, Netherlands
- Afvalzorg-model (multiphase)

  Scharff, H., J. Oonk, A. Hensen (2000) Quantifying landfill gas emissions in the Netherlands – Definition study. NOVEM Programme Reduction of Other Greenhouse Gases (ROB), project number 374399/9020, Utrecht, Netherlands,

  http://www.senternovem.nl/mmfiles/Afvalzorg%20Noord%20Holland%20definitiestudie%20kwantificering%20stortgasemissies_tcm24-221165.pdf
- GasSim (multiphase)-model

  Software downloadable from

  www.gassim.co.uk
- Gregory, R.G., G.M. Attenborough, D.C. Hall, C. Deed, 2003.

  Comparison of methane emission models and methane emission measurement

  http://www.afvalzorg.nl/Libraries/Rapporten_methaanemissies/Comparison_of_methane_emission_models_to_methane_emission_measurements.sflb.ashx
- GasSim

  Rule and Implementation Information for Standards of Performance for Municipal Solid Waste Landfills (including downloadable software and reference manual)

  http://www.epa.gov/ttn/atw/landfill/landflpg.html
- EPER France model

  ADEME, Outil de calcul des émissions dans l'air de CH_4, CO_2, SO_x, NO_x issues des centres de stockage de déchets ménagers et assimilés (version 0), reference manual downloadable to :

  https://www.declarationpollution.ecologie.gouv.fr/gerep/download/Annexe_2_Outil_de_calcul_ADEME_des_emissions_dans_lair_CH4_CO2_NOX_SO.pdf
- LandGEM-US-EPA

  US-EPA. (2001) Landfill Volume III,

  http://www.epa.gov/ttn/chief/eiip/techreport/volume03/iii15_apr2001.pdf (done)

These models are not necessarily appropriate to be applied in respect of every landfill. For instance the LandGEM US-EPA model calculates high methane releases since it presumes that the waste deposited is mainly organic. Further information can be found in the "Supporting document for the determination of diffuse methane emissions from landfills" under EPER Guidance on the EPER website or the E-PRTR website.

http://eper.ec.europa.eu/eper/documents/Supporting Document determination of emissions of landfills.pdf

Specifically related to intensive aquaculture

- The HELCOM "Guidelines for the compilation of waterborne pollution load to the Baltic Sea (PLC-water)" contains calculation of releases of nitrogen and phosphorus from intensive aquaculture

  http://www.helcom.fi/groups/monas/en_GB/monas_guidelines/
- OSPAR Convention for the protection of the marine environment of the North-East Atlantic: Guideline 2: Quantification and Reporting of Nitrogen and Phosphorus Discharges/Losses from Aquaculture Plants (Reference Number: 2004-2); (Source: OSPAR 00/9/2 Add.2 and OSPAR 00/20/1, § 9.5a).
  http://eper.ec.europa.eu/eper/documents/Supporting%20Document%20determination%20of%20emissions%20of%20landfills.pdf

Specifically related to agriculture

For the first EPER reporting cycle different calculation models have been applied at the national level for the determination of releases from **agriculture.** Further information on the methodologies used to determine the releases can be found in the "Supporting document on determination of emissions from pig and poultry farms" under EPER Guidance on the EPER website.

http://www.epa.ie/downloads/advice/licensee/

Specifically related to fugitive and diffuse sources at the facility level

The following information sources are examples related to releases from **fugitive and diffuse sources at facility level**. These also include fugitive and diffuse releases from facilities as addressed in the IPPC monitoring BREF:

- In the framework of the IMPEL network a project has been carried out with the objective to review the estimation methods and measures for diffuse VOC emissions used in the EU and to propose guidelines in order to improve the monitoring, licensing and inspection of industrial activities. The final report contains information on emission estimation methods.
  http://impel.eu/projects/diffuse-voc-emission
- CEN has prepared standards on "Fugitive and diffuse emissions of common concern to industry sectors" covering the "Measurement of fugitive emissions of vapours generating from equipment and piping leaks" (EN 15446:2008) and "Fugitive dust emission rate estimates by Reverse Dispersion Modelling" (EN 15445:2008). As stated in the standard itself, "the Reverse Dispersion Modelling method does not allow to quantify in absolute figures the dust emission rates in reason of an undetermined accuracy depending on various site conditions, but it is a tool which enables each industrial plant to identify its most emitting open dust sources, …".

- Euro-Chlor representing the Chlor-Alkali Industry has published in the Environmental Protection Series the "Guidelines for Making a Mercury Balance in a Chlorine Plant" (3rd Edition from June 2000) widely used by the European chlorine industry.

APPENDIX VI: GENERAL LINKS

NOTE:

- Based on UNECE list
- Links as on 10/05/2012

1. LINKS TO COUNTRY-SPECIFIC PRTR WEB SITES

- Australian Government
  Department of the Environment, Water, Heritage and the Arts
- Australia: Department of the Environment, Water, Heritage and the Arts - National Pollutant Inventory (NPI) (English only)
-
- Canada: Environment Canada - National Pollutant Release Inventory (NPRI) (English and French)
- Ministry of the Environment of the Czech Republic
- Czech Republic: Ministry of Environment - Integrated Pollution Register(Czech only)
- DANISH MINISTRY OF THE ENVIRONMENT
  Environmental Protection Agency
- Denmark: Danish Ministry of the Environment (Danish only)
-
- Finland: Finland's environmental administration - Pollutant Release and Transfer Register (PRTR) (Multilingual)
-
- France: Ministère de l'écologie, de l'énergie, du développement durable et de l'aménagement du territoire (French Only)

- 
- Hungary: Ministry of Environment and Water- European Pollutant Releases and Transfer Register (EPER-PRTR) (Hungarian and English)

- 
- Japan: Japan Ministry of the Environment (Japanese and English)

- 
- Japan: Japan Ministry of Economy, Trade and Industry (Japanese only)

- 
- Japan: Japan National Institute of Technology and Evaluation (Japanese and English)

- 
- Belgium: Federal Public Service Health, Food Chain Safety and Environment department - Belgium Pollutant Release and Transfer Register (Multilingual)

- 
- Norway: Norwegian Pollution Control Authority - The Norwegian Pollutant Release and Transfer Register (PRTR) (Norwegian and English)

- 
- Spain: Ministry of Environment and Rural and Marine Affairs. Spanish Register of Emission and Pollutant Sources, (PRTR-España) (Multilingual)

- 
- United Kingdom: England and Wales Environment Agency - Pollutant Release and Transfer Registers (PRTR) (English only)

- 
- United Kingdom: Scottish Environment Protection Agency - Pollutant Release and Transfer Registers (PRTR) (English only)

- 
- United Kingdom: Northern Ireland Environment & Heritage Services – Industrial Pollution Control (English only)

- 
- United Kingdom: Department of Environment, Food, and Rural Affairs PRTR (English only)

- 
- United States: United States Environmental Protection Agency - Toxics Release Inventory (TRI) (English only)

- 
- Germany: Fegeral Environment Agency (Umweltbundesamt), Pollutant Release and Transfer Register (PRTR) (English and German)

- 
- Sweden: Swedish Environmental Protection Agency - Pollutant Release and Transfer Register (PRTR) (Swedish and English)

- 
- Netherland: Netherlands Environmental Assessment Agency - Pollutant Release &

Transfer Register (PRTR) (Dutch and English)

- 
- Switzerland: Swiss Department of the Environment, Transport, Energy and Communications – Swiss PRTR (Swiss Pollutant Release and Transfer Register) (Multilingual)
- 

- Italy: ISPRA – High Institute for the Environmental Protection and Research (former APAT) (Italian only)
- 

- Greece: European Pollutant Emission Register (Greek only)
- 

- Ireland: Environmental Protection Agency (English only)
- 
- Austria: Environment Agency Austria - Pollutant Release and Transfer Register (PRTR) (German only)

2. LINKS TO INTERNATIONAL AGENCIES AND ORGANIZATIONS

- 
- European Pollutant Emission Register (EPER) and the European Pollutant Release and Transfer Register (E-PRTR) (Multilingual)
- 
- European Pollutant Emission Register (EPER) (Multilingual)

- 
- The European Pollutant Release and Transfer Register (E-PRTR) (English only)

- 
- North American Commission for Environmental Cooperation (CEC) (Multilingual)

- 
- Organisation for Economic Co-operation and Development (OECD) (English and French)

- 
- United Nations Economic Commission for Europe (UNECE) (English only)

- 
- United Nations Environment programme (UNEP) (Multilingual)

- 
- United Nations Institute for Training and Research (UNITAR) (English and French)

- 
- World Health Organization (WHO) (Multilingual)

- 
- PRTR section on the Aarhus Convention website (English only)

- 
- Aarhus Convention Clearinghouse PRTR resource database (English only)

ANNEX 6

PRTR ENTRY MODULE, USER MANUAL

CONSOLIDATING THE ENVIRONMENTAL MONITORING SYSTEM IN ALBANIA

A project funded by the European Union and managed by the Delegation of the European Commission to Albania

PRTR ENTRY MODULE, USER MANUAL

CEMSA Project

EuropeAid/128449/C/SER/AL – IPA 2008

September 2012

DISCLAIMER

This report has been prepared with the financial assistance of the European Commission. The views expressed herein are those of the consultants and therefore in no way reflect the official opinion of the European Commission

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TABLE OF CONTENTS

1 INTRODUCTION

1.1 OBJECTIVES

1.1.1 E-PRTR

The *European Pollutant Release and Transfer Register (E-PRTR)* is the Europe-wide register that provides easily accessible key environmental data from industrial facilities in European Union Member States and additional countries.

For each facility, information is provided concerning the amounts of pollutant releases to air, water and land as well as off-site transfers of waste and of pollutants in waste water from a list of 91 key pollutants including heavy metals, pesticides, greenhouse gases and dioxins. Some information on releases from diffuse sources is also available.

The register contributes to *transparency and public participation in environmental decision-making*. It implements for the European Community the UNECE (United Nations Economic Commission for Europe) PRTR Protocol to the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters.

The reporting of E-PRTR data to the European Commission is done by uploading the data reports to the Central Data Repository (CDR) of the EEA Report net site

In order for the Member States to validate E-PRTR data prior to upload to the CDR, a validation tool is provided: http://www.eionet.europa.eu/schemas/eprtr/validationtool.

1.1.2 PEM

This document describes the application called “PRTR Entry Module” (PEM) whose main purpose is facilitation of *E-PRTR information gathering* within Albanian facilities and, as a result, automatic generation of XML representation of data reports *acceptable by CDR*.

PEM is a web based application that enables its users to manipulate information regarding:

- Facility reports. Facility report is the main product of PEM containing all relevant environmental data for one facility in one year.
- Facilities.
- Companies that correspond to facilities
- Users of the system and their corresponding roles.

Following chapters are detailed description of PEM functionality, for more information regarding E-PRTR in general; “EPRTR User Manual” (http://www.eionet.europa.eu/schemas/eprtr/EPRTRUserManual.pdf) should be consulted.

2 FACILITY REPORT DEFINITION

PRTR entry module (PEM) *facility report* represents the collection of various information defining the pollutant releases and transfers for a certain facility for a given year. Starting from its creation and data entry by the facility users until its submission to the EU PRTR offices by the ministry users, each facility report follows the so-called *facility report input process*. As discussed further on, each stage of this process is defined and managed by the system.

2.1 FACILITY REPORT CONTENT

Following 10 sections define the content of each PEM facility report:

- Facility report general information. Examples: reporting year, river basin district code, product name etc.
- Activities
- Inspections
- Resource consumptions
- Energy consumptions
- Releases to air
- Releases to water
- Releases to land
- Waste water transfers
- Waste transfers

Each of the above sections is described in detail in [Facility report]

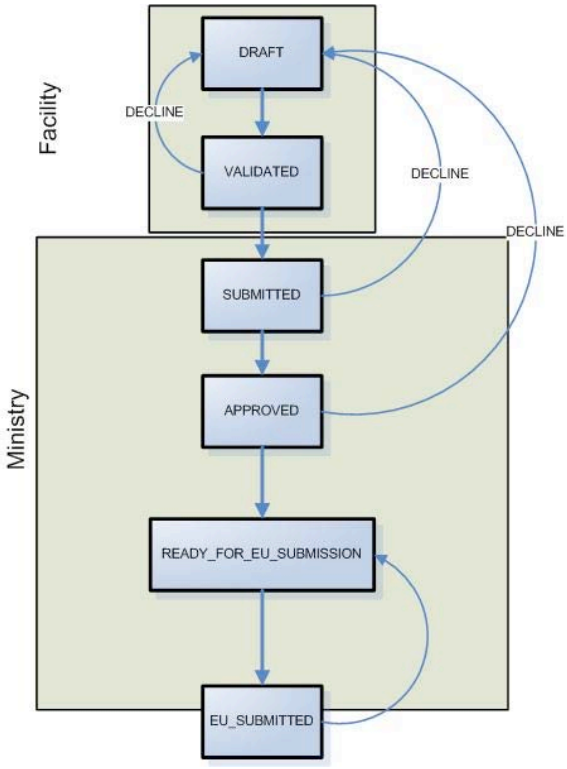
2.2 FACILITY REPORT STATE

Next to the before mentioned, each PEM facility report contains information on its current "*state*". State of the facility report is used to track down *the progress of the facility report input process*. Based on the current state of certain facility report, system can determine which actions can be undertaken by which users (roles) as described in [Users].

Following are facility report states: draft, validated, submitted, approved, ready for EU submission and submitted to EU.

All state changes are kept in the state change history and can be viewed by PEM users. Example: facility users can view the information regarding when, by whom and with which comment is their report declined.

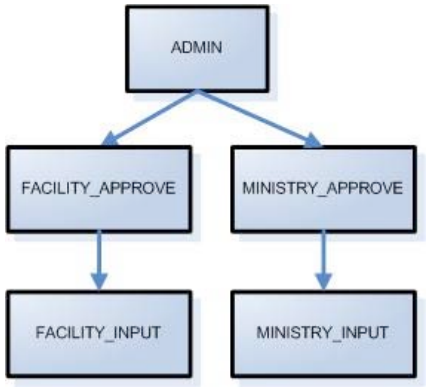
Following diagram depicts the possible states and state transitions that each PEM Facility report can have.


Facility
Ministry
DRAFT
VALIDATED
SUBMITTED
APPROVED
READY_FOR_EU_SUBMISSION
EU_SUBMITTED
DECLINE
DECLINE
DECLINE

3 USERS

Strict rules are applied regarding the authentication and authorization of PEM users:

- Each PEM user is provided with a username and password. Access to the system is granted only if existing and valid combination of username and password is provided in the PEM login page.
- Only *active* PEM users with at least one *role* can enter the system.
- Several „roles“can be assigned to each PEM user.
- Depending on the given role(s) and the current state of the information (e.g. facility report), system dynamically determines which actions are allowed to be taken by the user at given moment.
- PEM roles are hierarchical as depicted in the image below. Roles with higher hierarchy automatically inherit all the rights of the roles that are underneath them. For example: ADMIN has all rights that MINISTRY_APPROVE and FACILITY_APPROVE have.



PRTR Entry Module (PEM) users can be classified into 3 categories:

- Facility users
- Ministry users
- Administrator(s)

Following paragraphs describe these categories in detail.

4 FACILITY USERS

Facility users are the ones responsible for the creation and input of the annual facility report information (e.g. Waste transfers) before submitting it for further review and handling by the ministry staff. Following PEM roles exist for facility users:

- FACILITY_INPUT. Users having this role are allowed to:
  - Change the details regarding the facility information (address, permits etc.)
  - Create new facility report
  - Enter the facility report information
  - Change the state of facility report into „VALIDATED“ and back to its initial state „DRAFT“
  - Generate PDF reports
  - Delete facility report if its current state is set to „DRAFT“.
- FACILITY_APPROVE. Users having this role are allowed to:
  - Change the status of the facility report from “VALIDATED” to „SUBMITTED“.
  - Change the status of the facility report into its initial state „DRAFT“.
  - Execute all actions under identical conditions as FACILITY_INPUT

4.1 MINISTRY USERS

Ministry users are responsible for handling of annual facility reports, once they are submitted by facilities. Final objective is to create the XML representation for a chosen year and send the generated XML to the European PRTR offices. Following PEM roles exist for ministry users:

- MINISTRY_INPUT. Users having this role are allowed to
  - Change the state of facility report from „SUBMITTED“ to „APPROVED“
  - Change the state of the facility report into its initial state „DRAFT“
  - Generate PDF reports

- MINISTRY_APPROVE. Users having this role are allowed to:
  - Change the state of facility report from „APPROVED“ to „READY_FOR_EU_SUBMISSION“
  - Change the state of facility report from „READY_FOR_EU_SUBMISSION“ to „EU_SUBMITTED“
  - Generate the annual EU compliant XML for facility reports with status „READY_FOR_EU_SUBMISSION“.
  - Execute all actions under identical conditions as MINISTRY_INPUT.

4.2 ADMINISTRATING USERS

Administrators are PEM users that possess „ADMIN“role. As such they are able to access the administration module of the application and manage information regarding:

- Creating, editing and deleting of PEM companies
- Creating, editing and deleting of PEM facilities as well as their relation to corresponding companies
- Creating, editing and deleting of PEM users. Management of user roles as well as their relation to their facilities is also part of administrator' tasks.

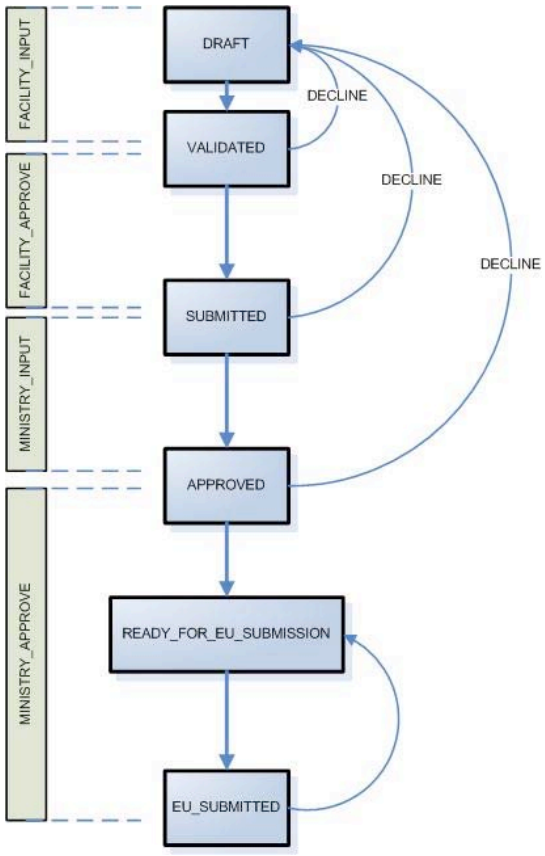
Above that, administrators can execution of actions under identical conditions as MINISTRY_APPROVE and FACILITY_APPROVE can.

In other words, *all possible actions* in PEM can be executed by the administrator. Especially the actions belonging to the administration module can have severe implications. As an example; deletion of existing facility or company will lead to deletion of all facility reports related to this or these facilities.

Therefore it is important to carefully choose who the administrator will be and he or she should take care of the secrecy of the administrator' password.

4.3 SUMMARY

Following diagram represents an overview of PEM role authorization rules related to facility report management.



5 SYSTEM REQUIREMENTS

Main requirement for usage of PRTR Entry Module (PEM) is network connectivity to the server where PEM is installed and running. PEM can be accessed by all popular browsers (Firefox, Chrome, Internet Explorer, etc.).

By contacting the system administrator, the URL (of the server where PEM is installed), username and password can be provided.

In order to read the PDF reports that can be generated by the system, Adobe Acrobat Reader must be installed.

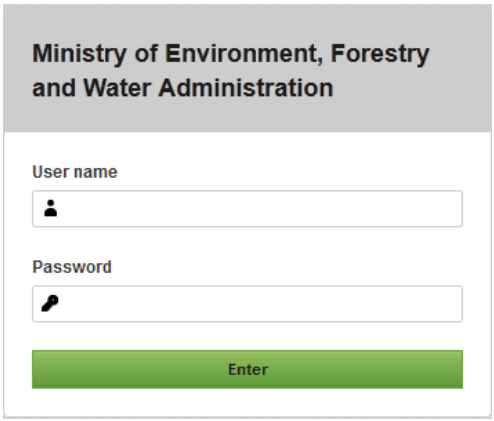
6 PRTR ENTRY MODULE

6.1 GENERAL

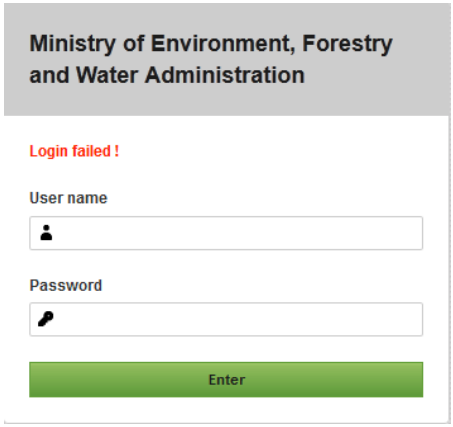
Following paragraphs describe the general functionality of PRTR Entry Module (PEM) accessible by all users.

6.1.1 LOGIN PAGE

After opening of the application is requested (by entering the URL in the browser or by following the link), login page will be displayed as depicted below. Access to the application can be achieved only if existing and valid username and password combination is provided.



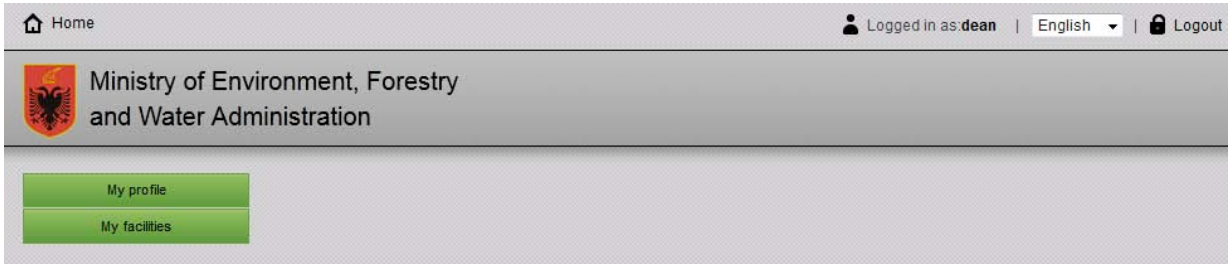
In case of login failure, similar page will reappear with error message:



There is no limit in number of attempts a user can make while trying to successfully log into the system.

6.1.2 HOME PAGE

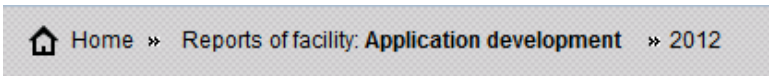
Each successful login is followed by appearance of the so-called “home” page of the application:



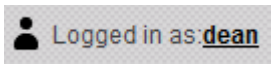
6.1.3 HOME PAGE HEADER

Most of the elements of the upper part (header) of the home page are present in all other pages of the application. Following are the possibilities:

- “Home” hyperlink will return the user to his/her home page
- So called “breadcrumb trail” will be dynamically added or removed to the “Home” link depending on the page the user is currently on. Example of breadcrumb trail for a user that is viewing a facility report for year 2012 of facility called ‘Application development’ is:

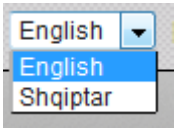


- Each element of the breadcrumb trail is clickable and brings user back to the corresponding page. In this example: clicking on “Application development” will open the overview page of the facility called “Application development”. Username presented in the “logged in as” part is also a hyperlink that presents “User profile page” to the user.



Details of this page are described further on in [My profile].

- Language dropdown box allows the user to select the language in which the application is presented. Currently Albanian and English are supported languages:



Changing the language dynamically translates any page the user might be on at that moment and sets the new language as the language of choice for the remaining duration of the user session.

- "Logout" is a hyperlink that will cause the termination of the user session and present the user with the login screen.

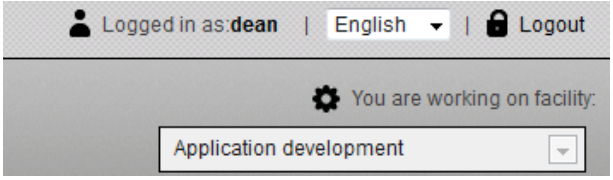
After clicking on this link, user needs to log in again in order to use the system.
In case administrator has logged in, the upper part of the home page is extended with additional "Admin" link as depicted below.

This link presents the user with the administration module of the application. Administration module is described in detail in [Administration module].

- In case that user with ministry roles is logged in, additional link may appear in the right corner of the upper part of the home page:

This link will be visible for ministry users only in case that at least one facility reports (from any facility) is present with one of the following states as its current state: SUBMITTED, APPROVED and READY_FOR_EU_SUBMIT. By clicking on this link, user will be presented with the "Facility reports" page. This page (described in [Ministry facility reports]) normally allows the user to view all nationwide facility reports. By clicking on this link however, this page will be opened with pre-filtered reports that have one of the states from the above list as current state. As described later, these 3 states are known as "MINISTRY_TO_DO" filter possibility in that page.

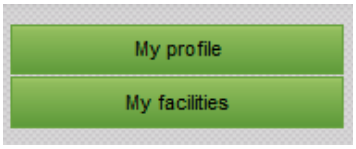
- In case facility user is logged in and has selected certain facility (e.g. facility called "Application development") to work on, following will appear in the right upper part of the page:



6.1.4 HOME PAGE BODY

The lower part of the home page (body) is dynamically determined depending on the role(s) of the user.

For users with facility roles (FACILITY_INPUT and/or FACILITY_APPROVE), following menu will appear:



- My profile" presents the "User profile page" to the user. Details of this page are described in [My profile].
- "My facilities" will open an overview of facilities this user belongs to. Overview of facilities is described in detail in [Overview of facilities].

For users with ministry roles (MINISTRY_INPUT and/or MINISTRY_APPROVE), following menu will appear.

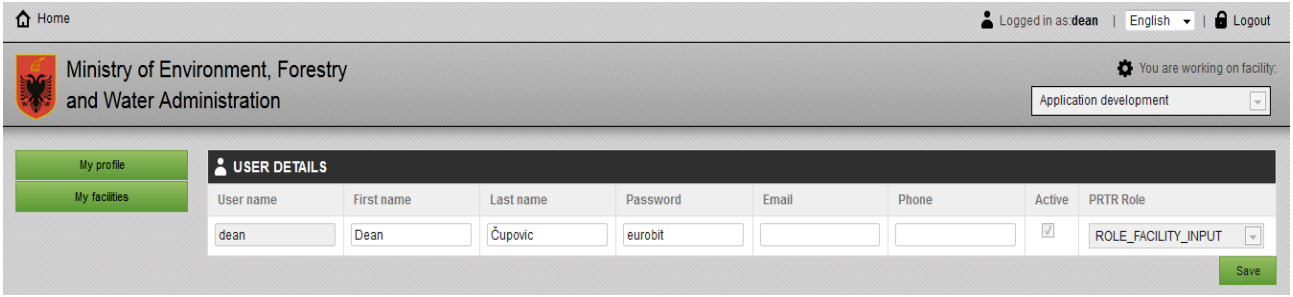
- "My profile" presents the "User profile page" to the user. Details of this page are described further on in [My profile].
- "Facility reports" will open an overview of all, nationwide, facility reports. Overview of nationwide facility reports on this page is described in detail in [Ministry facility reports].

For users with admin role (ADMIN), following menu will appear:

- The first 2 links are identical to the links presented to ministry roles. The last "PRTR Administration" link brings the user to the administration module described in [Administration module].

6.2 MY PROFILE

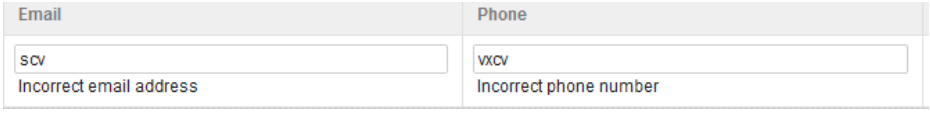
User profile page allows the user to change his or her personal information. First name, last name, password, email and phone are the fields that can be changed. User name (used by the system to identify the user), "active" flag (only active users can enter the system) and user' current role cannot be changed in this page. For changes of these fields, administration module needs to be used (see [Administration module]) by administrator of the system.



None of the editable field is mandatory. However, following fields will be checked for correct format when "Save" button is clicked:

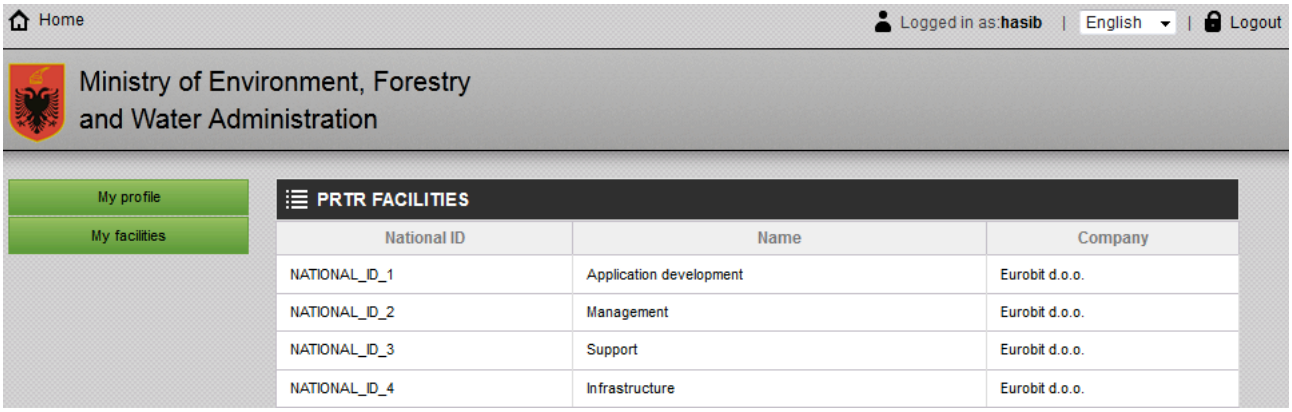
- Email address must be correct according to standard email definitions.
- Phone number must be consisted of digits only and can be prefixed with a single '+' sign.

Attempt to save an incorrect version of email end/or phone information will result in error message(s):

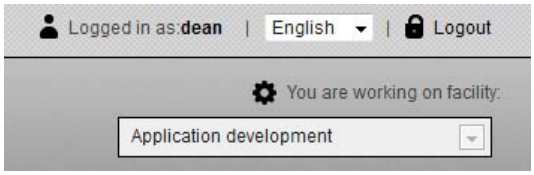


6.3 OVERVIEW OF FACILITIES

PRTR Entry Module (PEM) users are allowed to have access to multiple facilities in the system. Only users with administrating role can change that information. Once a user is assigned to one or more facilities, access to these facilities (and corresponding reports) is possible through "Facilities overview page".

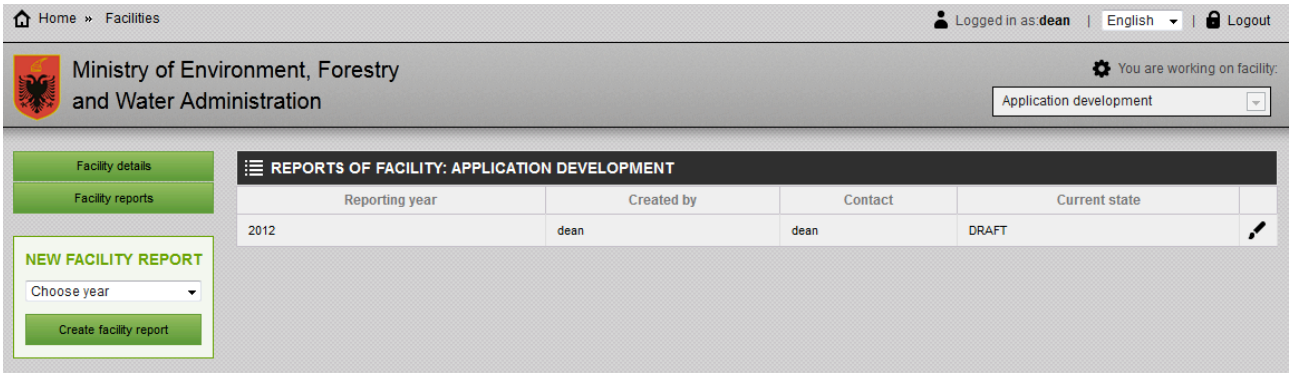


This page presents a clickable table showing the significant fields (National ID, Name and Company name) of each facility user has access to. Clicking on a row of this table will navigate the user to the "Facility reports" page of the selected facility. Additionally, starting from the moment the user clicks on this page, the right side of the header will be displaying the information about the chosen facility, as depicted below:



6.4 FACILITY REPORTS

By default, "Facility reports" page shows the list of facility reports of the facility the user is working on. Each report is presented with following fields: reporting year, created by, contact and current state. Clicking on a row of this table will navigate the user to the facility report page (see [Facility report]).



Additionally, buttons on the left side allow the user to:

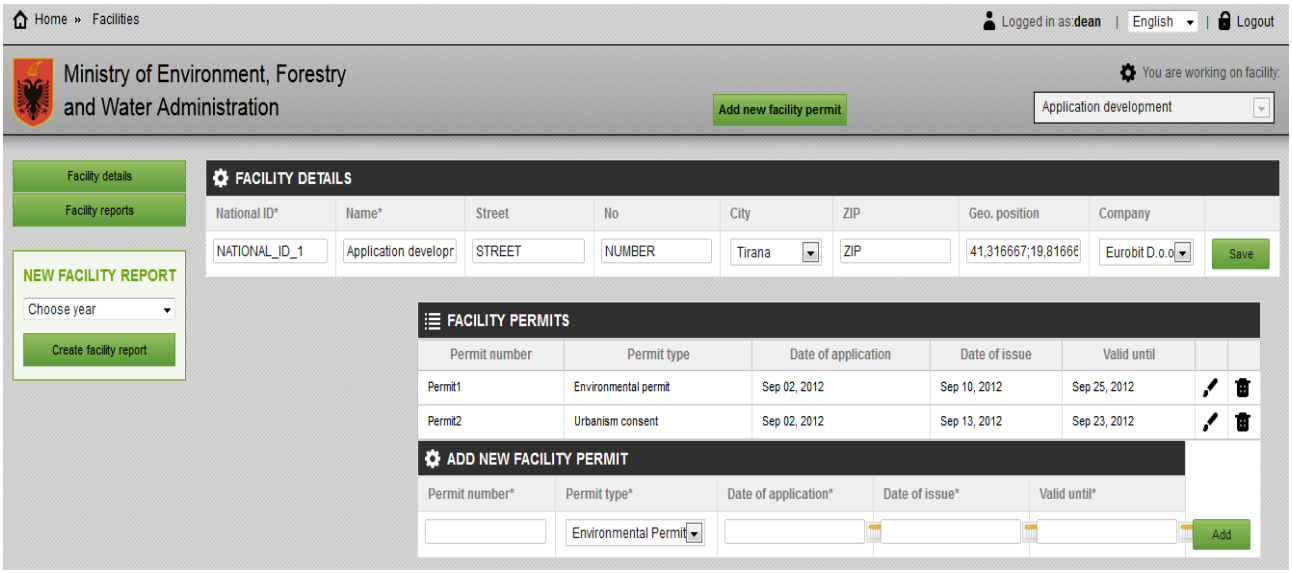
- Display or refresh the list of all existing reports of the facility the user is working on by clicking on “Facility reports” button.
- Access the facility detail page by clicking on “Facility detail” button (see [Facility details]).
- Create a new facility report based on the selection of the year from the drop down menu.
    - The content of this drop down menu is dynamically created and represents all years not older than 10 and not having any facility report already defined. If, for example, a report has already been created for the last year (even if it is only in DRAFT state), that year will not be available for selection for new report creation.
    - Once a year is selected, user can click on “Create facility report” to create a new row in the report overview table. The new report will contain following information:
        - Reporting year (the selected year)
        - Created by (the user that pressed the button)
        - Current state is set to DRAFT.

To continue working on the new report, user needs to click on the newly created row and navigate to the details of this report.

6.5 FACILITY DETAILS

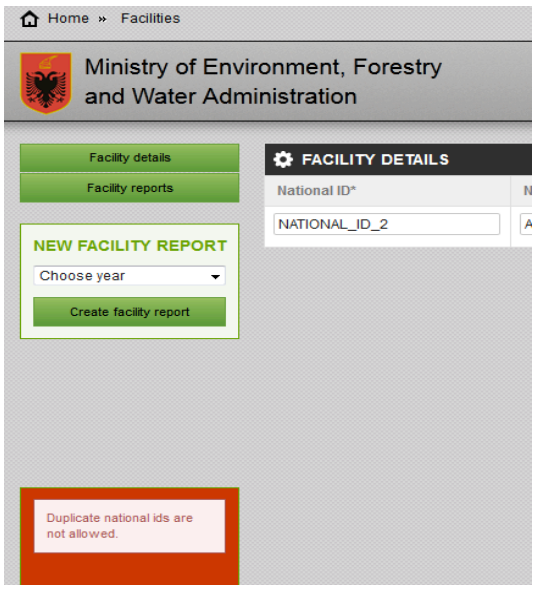
Facility details page allows the user to modify facility related information. The first part of this page ("Facility details") represents the basic facility information and the second lower; part ("Facility permits") represents the information regarding the permits of the facility.

BASIC FACILITY INFORMATION can be changed by pressing the "Save" button in the last column of the upper table.



Basic facility information is consisted of following fields:

- National ID.
  - National ID is a unique facility identifier used to communicate the facility identification to the European Commission. Attempt to change the national id to another, already existing, national id will result in an error displayed in the left lower side of the page:



Additionally, change to the national id of the facility will result in change of the "Creation national id" field of every report that is not yet submitted to the EU (status different from EU_SUBMITTED). "Creation national id" is kept by the application for every facility report and is not necessarily identical to the current national id of that facility. This is required by EU to track down the changes in the national id during course of years. Once a report is submitted to the EU, this field cannot be changed.

- Name represents the name of the facility.
- Street represents the street name of the facility.
- Number is the house number of the facility.
- City represents a city from the list of all Albanian cities.
- Zip is the postal code of the facility.
- Geo position is a required field representing the geographical coordinates of the facility and is, as such, used by various visualization applications (e.g. map based visualization available on http://prtr.ec.europa.eu/).

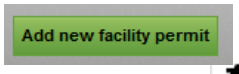
  By default, the coordinates of each facility is set to "41, 316667; 19, 816667" which is the geographical position of Tirana (according to http://en.wikipedia.org/wiki/Tirana) according to "EPSG: 4326" coordinating system that is currently set as standard within the application. The coordinates of the location of the facility should be expressed in longitude and latitude coordinates giving a precision of the order of at least ± 500 meters and referring to the geographical centre of the site of the facility. The longitude (number before the ';' sign) must be in the interval [-180; 180]. The latitude (number after the ';' sign) must be in the interval [-90; 90].
- Company represents the name of the parent company, i.e. the company that owns or controls the facility and is made as selection of defined companies within the system.

FACILITY PERMITS is a table representing all permits of the facility with following fields per permit:

- Permit number represent the number of the permit
- Permit type represents the permit type
- Date of application is the date when the application for permit is submitted.
- Date of issue is the date when the permit has been issued.
- Valid until is the date until the permit is set to be valid.

Facility permits table can be used to either:

- edit the existing permit by clicking on button on the desired row or
- Start adding a new permit by clicking on button in the upper (header) part of the page.



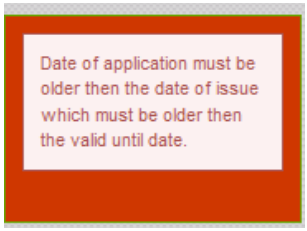
- Additionally, permits can be deleted by clicking on button on the desired row.

When editing the existing permit, the details of the selected permit will be changed by pressing the "Save" button while the same button changes its title into "Add" in order to complete the creation of a new permit.

Following rules apply for each permit, during creation and edit:

- All fields are mandatory. Not entering a Permit ID and clicking the Save/Add button will result in error being displayed next to the field itself and in the error box:

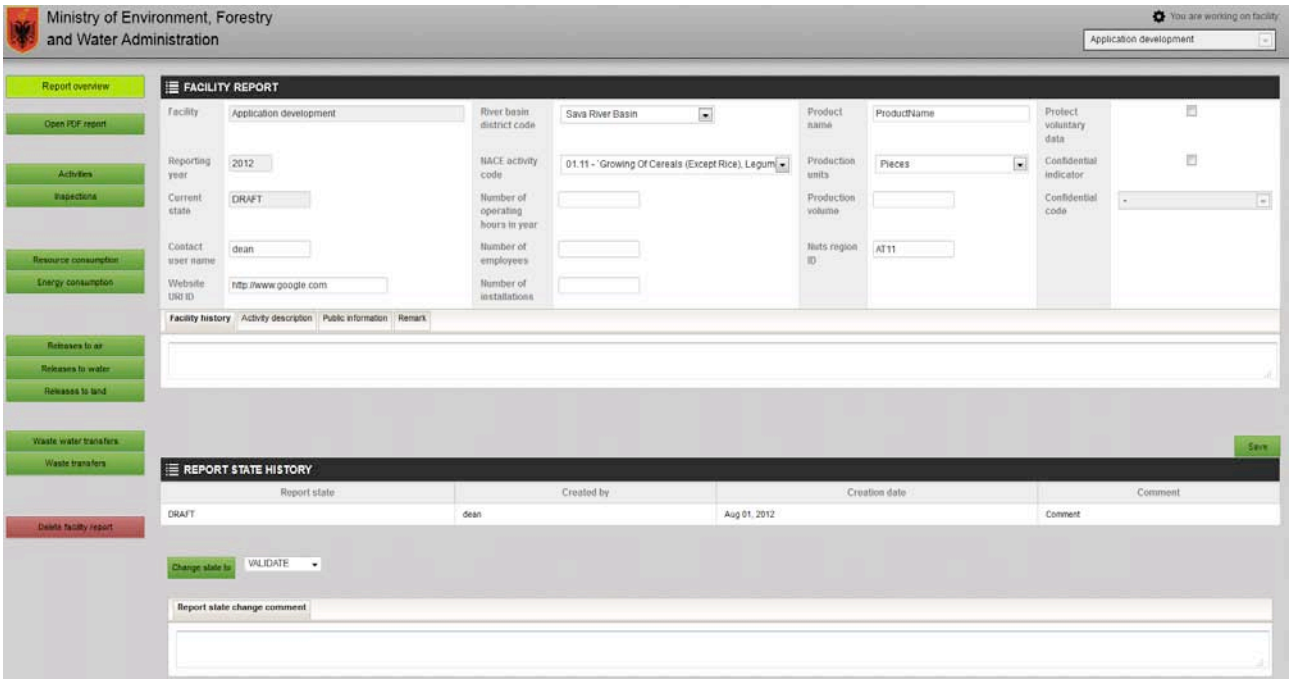
- Valid until date must be younger then date of issue and date of issue must be younger then date of application. If not, following error will appear in the error box after clicking the Save/Add button:



6.6 FACILITY REPORT

Facility report management is the central module of PRTR Entry module (PEM) application. Throughout these pages, facility user is able to fill in the details of the pollutant releases and transfers for the reporting year of the report. Additionally, state management of the facility report is implemented in this module and can be used by facility and ministry users.

Facility report management is possible through usage of 10 pages, all based on the same template as depicted below:



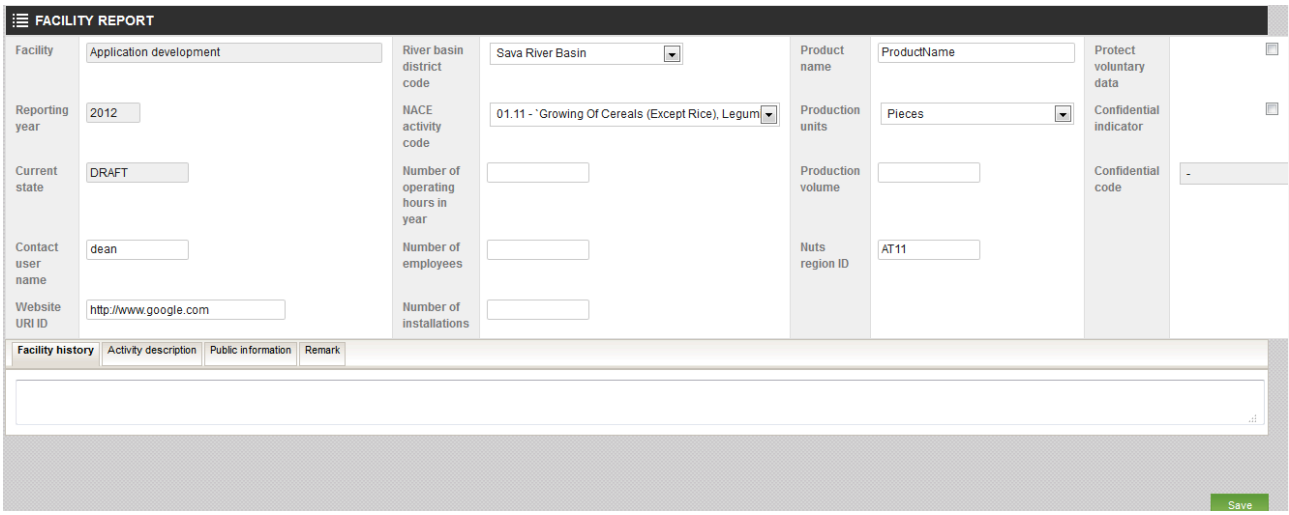
While the right (content) side of the page will vary depending on the selected detail, 12 buttons in the menu on the left side are available at all times. The pages and functionality behind these buttons are discussed in the following paragraphs. Buttons that lead to a different page change their colors while the selected page is opened in order to assist the user in being aware which page is selected at any moment.

6.6.1 REPORT OVERWIEW

Report overview consists of 2 parts:

- Report general information
- Report state management

6.6.2 REPORT GENERAL INFORMATION



First, report general information, part allows the user to modify/view basic facility report fields. First 2 fields are the ones that are created immediately after facility report creation and cannot be changed:

- Facility represent the read-only name of the facility this report belongs to
- Reporting year is the read-only representation of the year this report is reporting on

Remaining fields are:

- Current state is the read-only representation of the current state of the report.
- Contact name is a free input field representing the name of the contact person for this report. It can be empty.
- Website URI ID represents the URL of the facility website, it can be left empty. However, if entered, it needs to start with http:// .
- River basin distinct code identifies the river basin district according to according to Article 3(1) of Directive 2000/60/EC ("Water Framework Directive")
- NACE activity code identifies the NACE code according to the NACE 2 revision and thereby the main economic activity.
- Number of operating hours in year is the number of operating hours in reporting year.
- Number of employees is the number of employees of the facility.
- Number of installations is the total number of IPPC installations covered by the facility
- Product name. The product/product group.
- Production units is selection of one of legal production unit codes as defined in http://www.eionet.europa.eu/schemas/eprtr/listOfValues
- Production volume. The total volume. The unit must be given in attribute supplied in the value of “production units” field.
- Nuts region ID identifies the region that the facility belongs to as defined by NUTS (http://ec.europa.eu/eurostat/ramon/nuts/codelist_en.cfm?list=nuts)

- Protect voluntary data indicates if voluntary data should be protected or not. In this case all voluntary data of the facility is considered protected with a few exceptions at stated in the descriptions of the individual elements.
- Confidential indicator indicates if confidentiality for mandatory data is claimed or not.
- Confidential code identifies the reason for confidentiality according to Directive 2003/4/EC, Article 4(2).
- Facility history contains additional information on facility. This information is not supplied in the final XML submitted to EU.
- Activity description contains additional information on the activity of this facility. This information is not supplied in the final XML submitted to EU.
- Public information is additional textual information to be published on E-PRTR web site as-is (e.g. e-mail, contact person etc.).
- Remark is additional textual remark, e.g. information in changes of the history of the facility, elaboration on the reason for confidentiality etc.

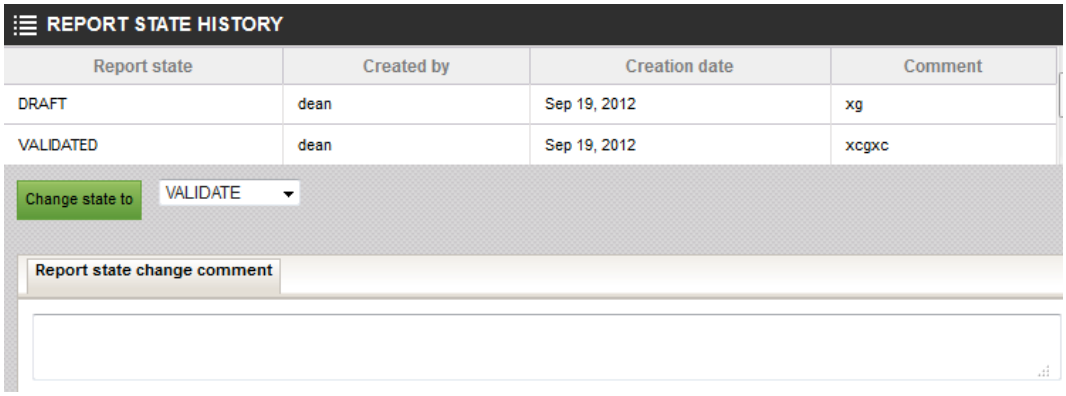
For more detailed information and explanation on the majority of the above fields, please consult http://www.eionet.europa.eu/schemas/eprtr/EPRTRUserManual.pdf.

By using the "Save" button; user will save the changes in the above described fields without further validation and checks. It is only when user decides to change the state of the facility report (as described further on) that the system validates the input of complete facility report and can show errors to the user.

Important: changes made on this page will be lost if user clicks to navigate to a different page without pressing the "Save" button first.

6.6.3 REPORT STATE MANAGEMENT

Lower part of the report overview page represents the so-called state management of the facility report:



The first table described the history of all states this report has had in the past, including the current one in the first row.

Below the table functionality to change the current state of the facility report is provided. By pressing the "Change state to" button, the selected state, in the drop down box next to it, will be assigned to the report. Additionally, "Report state change comment" may not be blank during state change operation.

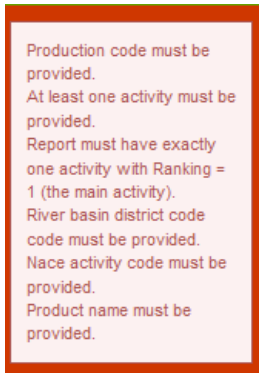
The choice of possible states in the drop down box is dynamically determined depending on the roles the current user has and the current state of the report. Diagram in [Facility report state] depicts those possibilities.

One particular state transition is important to understand. “VALIDATE”. When this operation is requested, the system will first check the necessary requirements (mostly imposed by EU) in order to make sure that the content of the report is valid for further handling. Once a report has reached the “VALIDATED” state, its content cannot be changed anymore by anyone. It is only by bringing the report back to DRAFT (by declining the report) that it can again become writable.

Following are the examples of the validations that are applied when the change to VALIDATE has been requested:

- Facility report needs to have at least one activity (see following paragraph) with ranking number 1.
- If provided, website URI must start with http://
- River basin distinct code is mandatory
- Product name is mandatory
- Production code is mandatory
- NACE activity code is mandatory

Failure to provide the above, prior to submit the VALIDATE state change; will result in errors being displayed in the error box on the lower left side of the page:

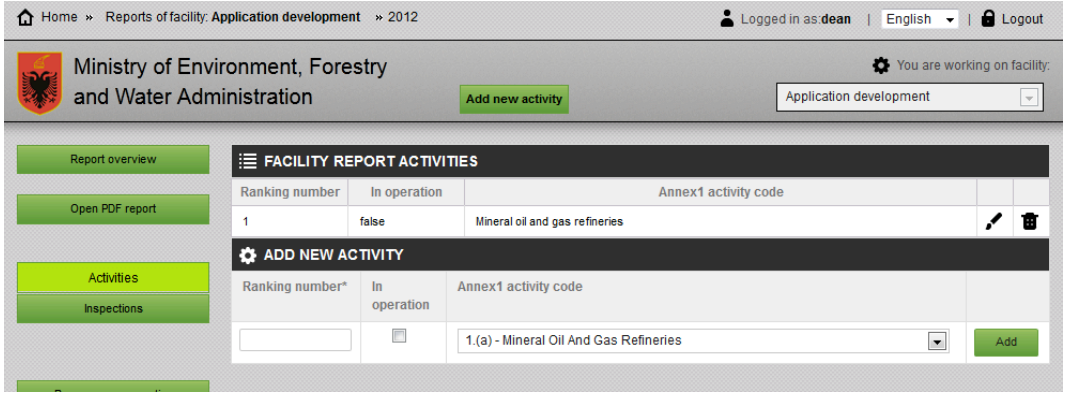


6.6.4 PPEN PDF REPORT

Pressing the “Open PDF Report” button will open a PDF document with details of the currently opened facility report. For details on this report and others, please consult [Reports]

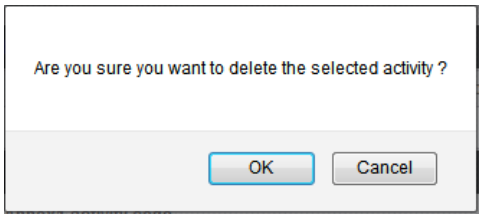
6.6.5 ACTIVITIES

Activity elements are integral part of the exported XML and hold the definition of activities of a facility. Ranking number is a mandatory field and must be unique. Above that, having at least one activity with ranking number “1” is a requirement imposed by the E-PRTR.



Activities table can be used to either:

- edit the existing activity by clicking on link on the desired row or
- start adding a new activity by clicking on Add new activity button in the upper (header) part of the page.
- Additionally, activities can be deleted by clicking on button on the desired row. Following dialog needs to be confirmed in that case:



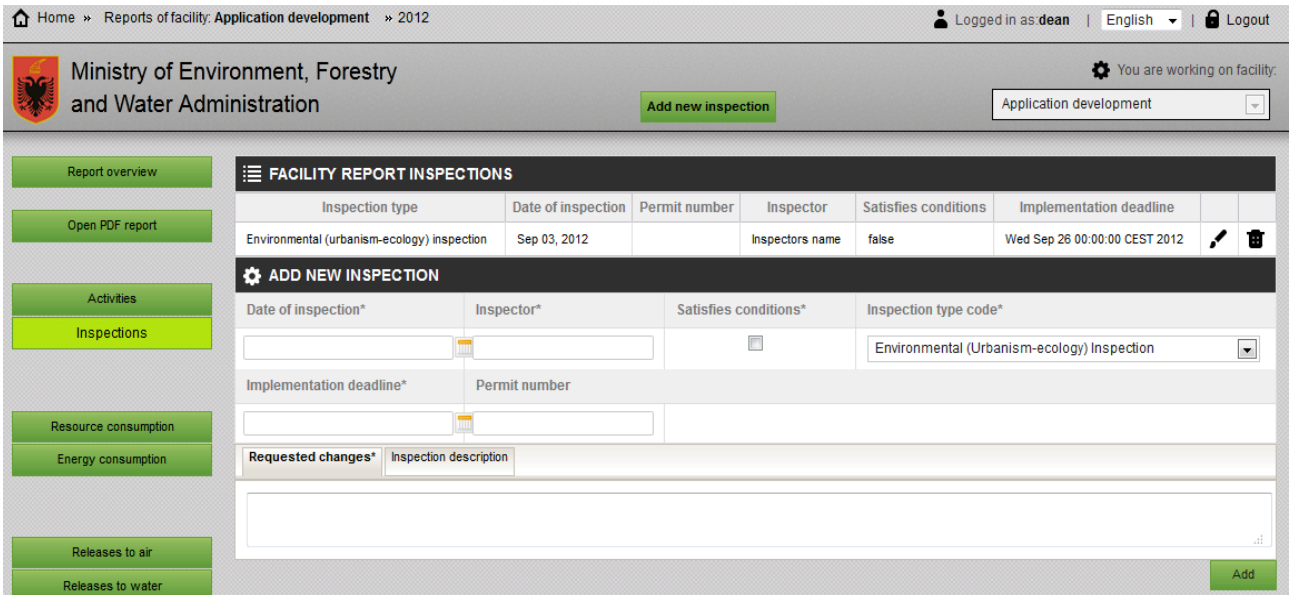
6.6.6 INSPECTIONS

Inspections are information about conducted inspections in facility during reporting year.

Inspections are not part of the exported XML.

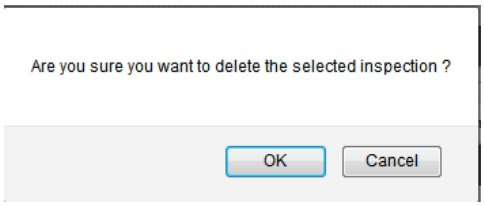
Following fields are mandatory for each inspection:

- Date of inspection
- Inspector which represents the name of the inspector
- Implementation deadline
- Requested changes



Inspections table can be used to either:

- edit the existing inspection by clicking on link on the desired row or
- start adding a new inspection by clicking on Add new inspection button in the upper (header) part of the page.
- Additionally, inspections can be deleted by clicking on button on the desired row. Following dialog needs to be confirmed in that case:

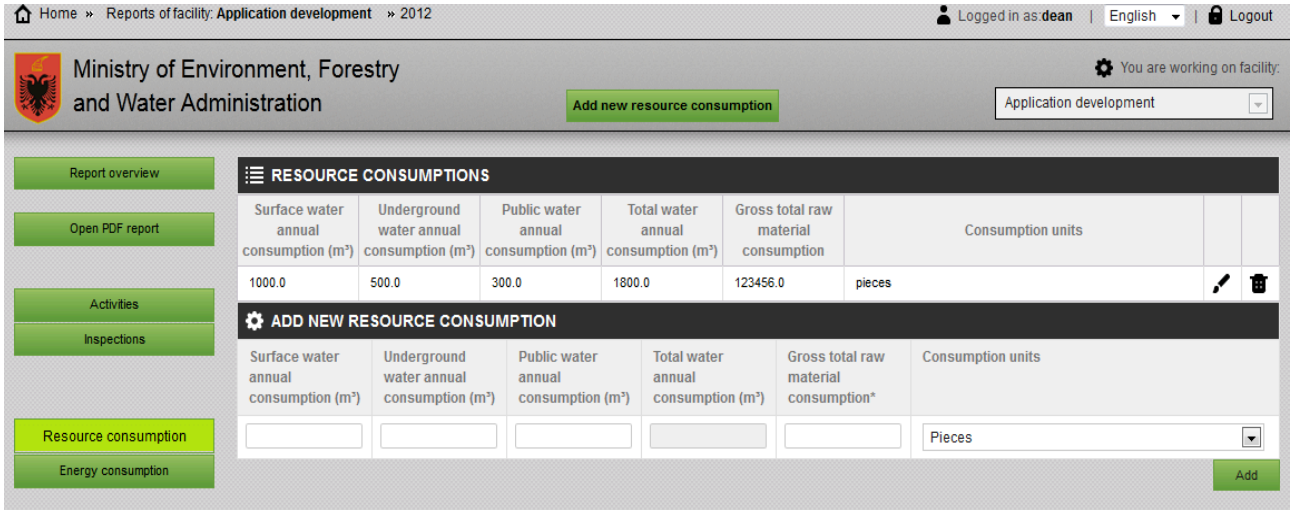


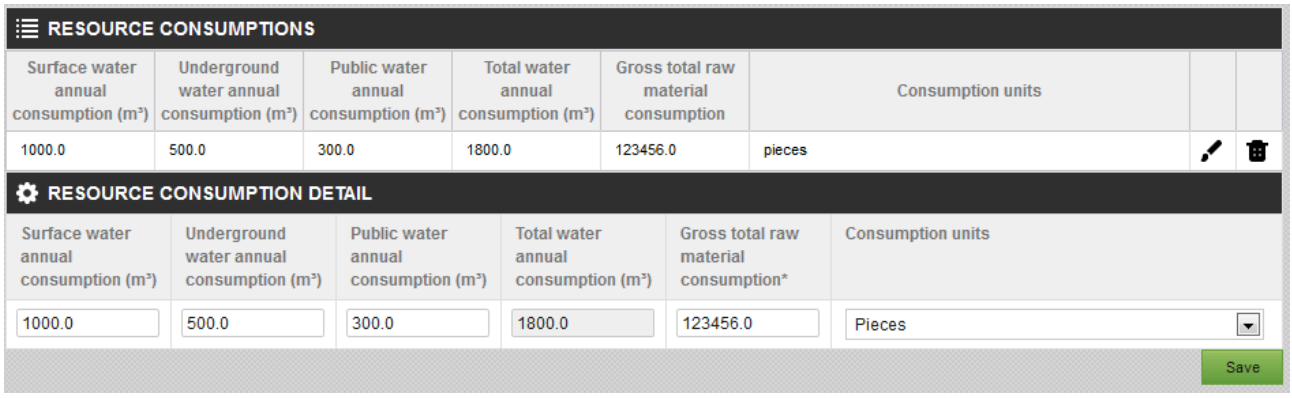
6.6.7 RESOURCE CONSUMPTION

Resource consumptions are information about consumed resources in facility during reporting year.

Resource consumptions are not part of the exported XML.

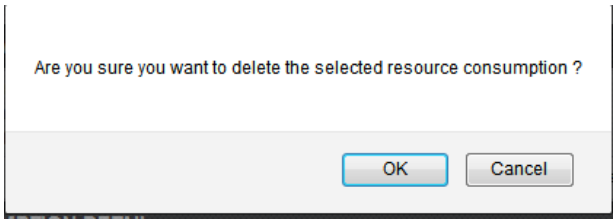
"Gross total raw material consumption" is the only mandatory field that needs to be expressed in the unit selected in the "Consumption units" field. Other, optional, fields are expressed in m^3.





Resource consumptions table can be used to either:

- edit the existing resource consumption by clicking on link on the desired row or
- start adding new resource consumption by clicking on Add new resource consumption button in the upper (header) part of the page.
- Additionally, resource consumptions can be deleted by clicking on button on the desired row. Following dialog needs to be confirmed in that case:

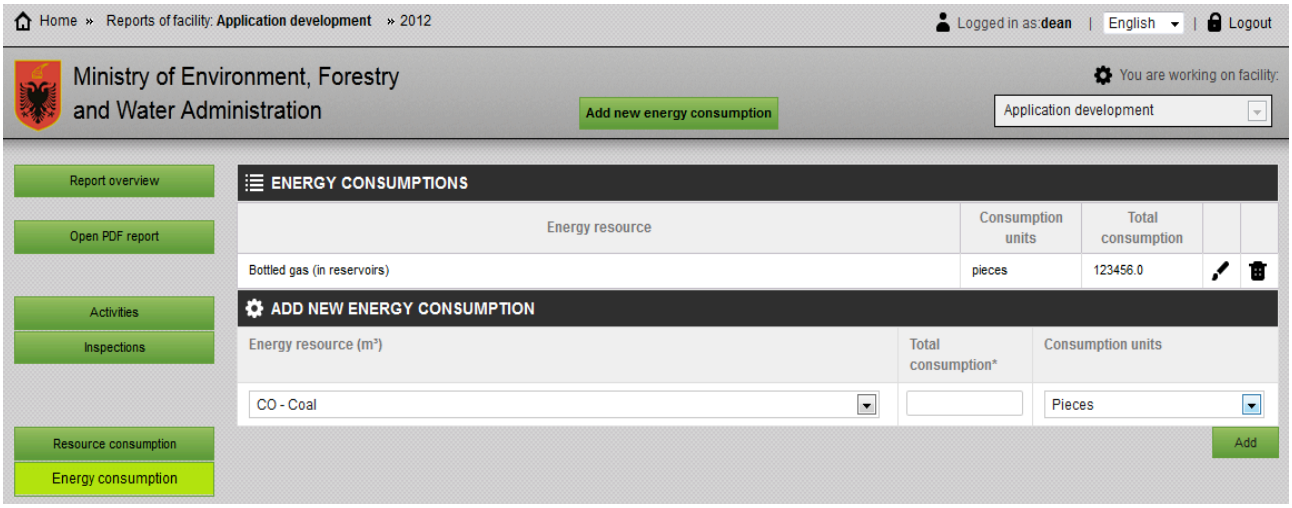


6.6.8 ENERGY CONSUMPTION

Energy consumptions are information about consumed energy resources in facility during reporting year.

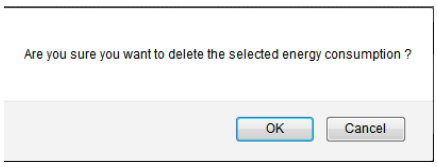
Energy consumptions are not part of the exported XML.

“Total consumption”, expressed in the unit selected in the “Consumption units” is a mandatory field.



Energy consumptions table can be used to either:

- edit the existing energy consumption by clicking on link on the desired row or
- start adding new energy consumption by clicking on Add new energy consumption button in the upper (header) part of the page.
- Additionally, energy consumptions can be deleted by clicking on button on the desired row. Following dialog needs to be confirmed in that case:

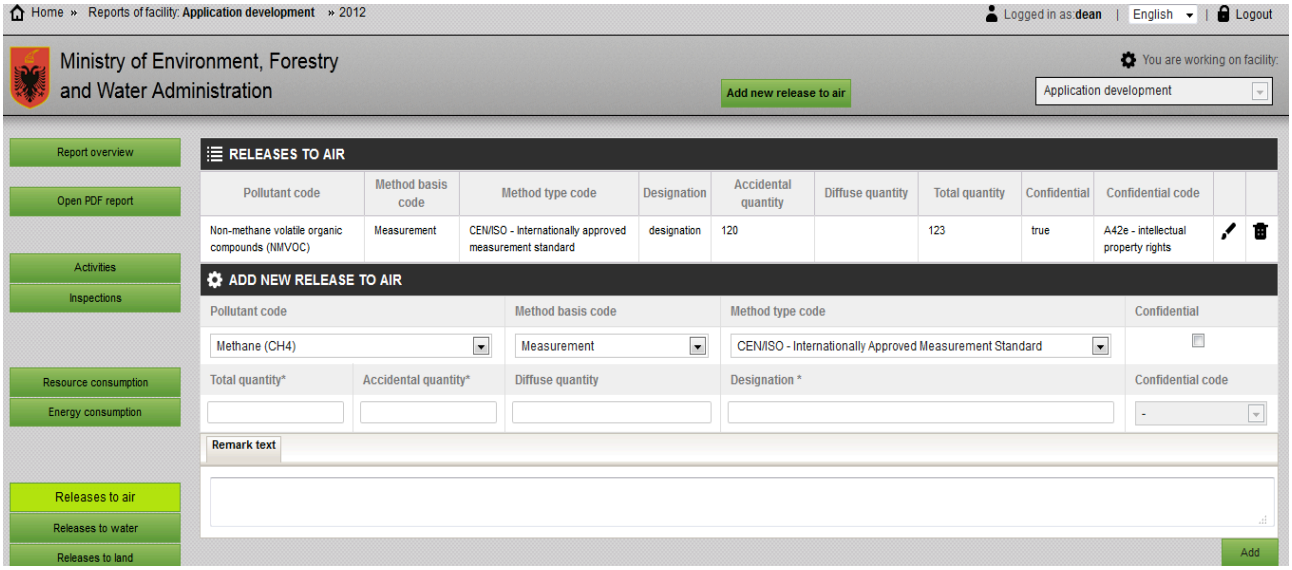


6.6.9 RELEASES TO AIR

“Total quantity” is a mandatory field and needs to be greater than or equal to the sum of “Accidental quantity” and “Diffuse quantity” which are also mandatory fields. Depending on the method type code that is selected, designation field will or will not be mandatory:

- Measurement “CEN/ISO - Internationally approved measurement standard “ has a mandatory designation.
- Calculation “ETS - Guidelines for the monitoring and reporting of greenhouse gas emissions under the Emission Trading Scheme” has a mandatory designation.

- Calculation “IPPC - IPCC Guidelines” has a mandatory designation.
- Calculation “UNECE/EMEP” has a mandatory designation.



Three types of quantities (total, accidental and diffuse) have to be expresses in kg/year and with three significant digits (“3 significant numbers”) format. Following examples are valid quantities: "0.00", “123", "1230", "12300", "123." , "12.3", "12.0", "10.0", "1.23", "1.20", "1.00", "0.123", “0.120", "0.100", "0.0123", "0.0120", "0.0100", "0.0123", "1.55", "7070", "123", "1000" etc.

Examples of invalid quantities are: "", "a", "1234","1234.", "12", "12340", "1", "1.0", "1.001", "1.1", "0", "0.", "0.0" etc.

Additionally, following rules are applied:

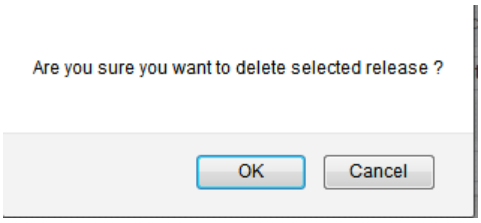
- Total quantity is indication of the total quantity of the pollutant released to air from all sources of the activity (including accidental releases and releases from diffuse sources)
- Accidental quantity is indication of the quantity of the pollutant accidentally released to air
- Diffuse quantity is indication of the quantity of the pollutant released to air from diffuse sources
- One type of pollutant code can be entered only ones for releases to air within each facility report. Attempt to create a release with pollutant code that is already defined within this category (air) of release will result in error:

- If confidentiality is claimed:
  - Confidential code must be supplied
  - Pollutant group instead of pollutant code will be exported to E-PRTR XML. List of pollutant codes and corresponding groups can be found via http://www.eionet.europa.eu/schemas/eprtr/listOfValues
- Remark text which is optional will not be published by E-PRTR.

Releases to air table can be used to either:

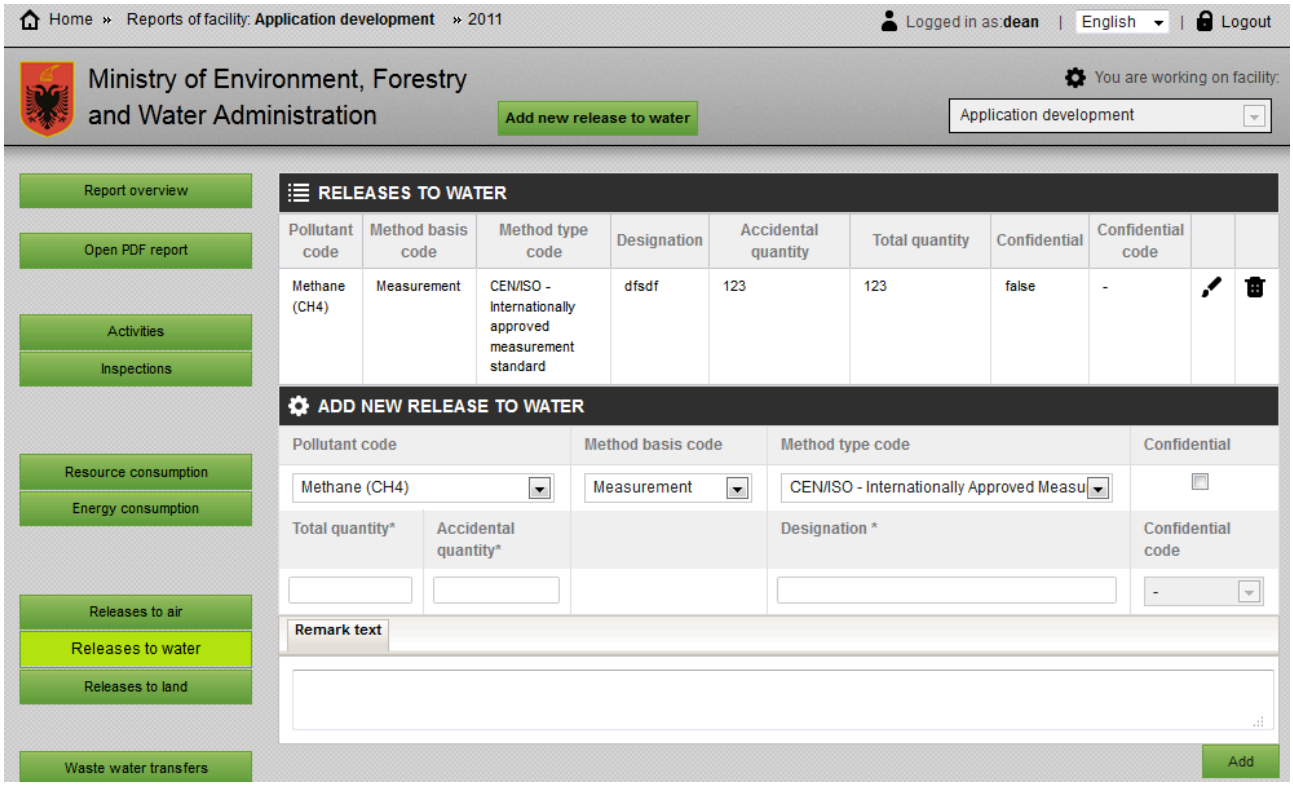
- Edit the existing release to air by clicking on  link on the desired row or
- Start adding a new release to air by clicking on  button in the upper (header) part of the page.

- Additionally, release to airs can be deleted by clicking on button on the desired row. Following dialog needs to be confirmed in that case:



6.6.10 RELEASES TO WATER

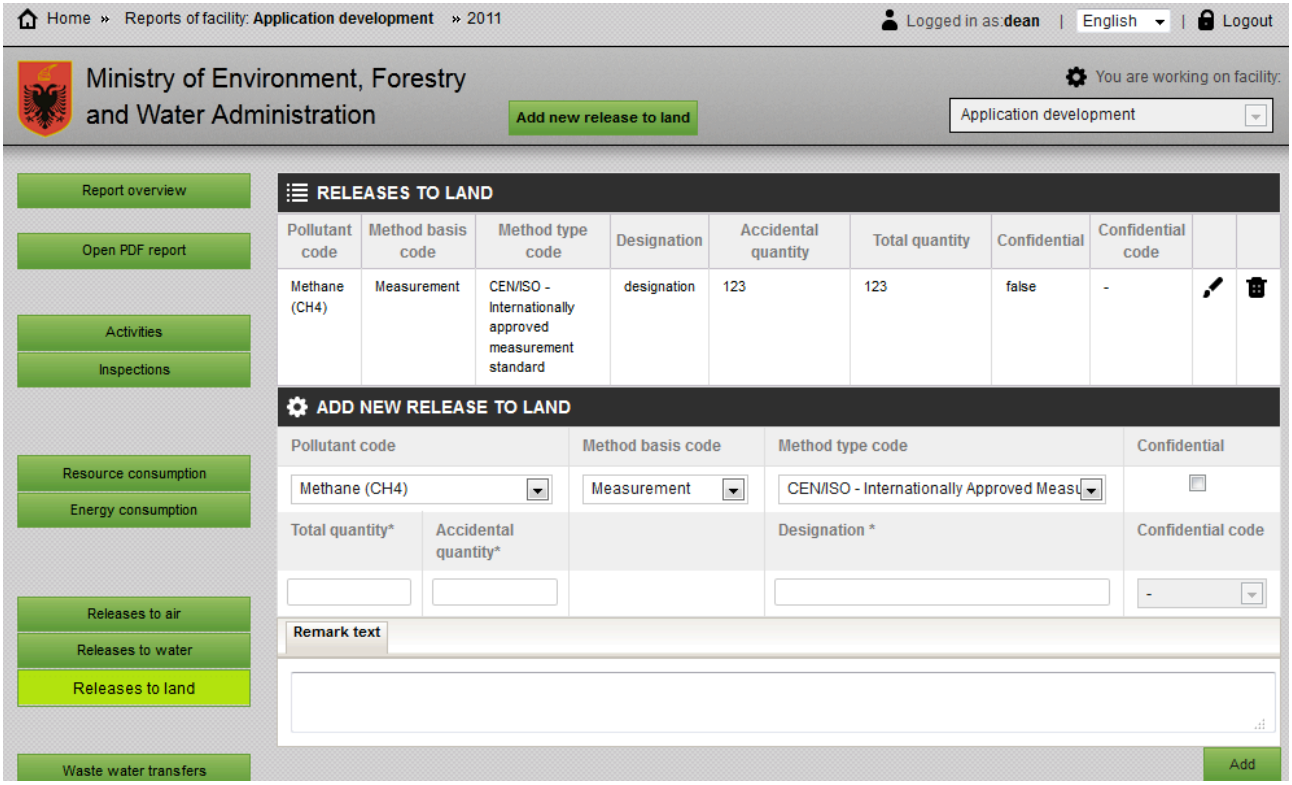
Releases to water are categorized as *water* medium *Pollutant Release* elements of the XML submitted to E-PRTR



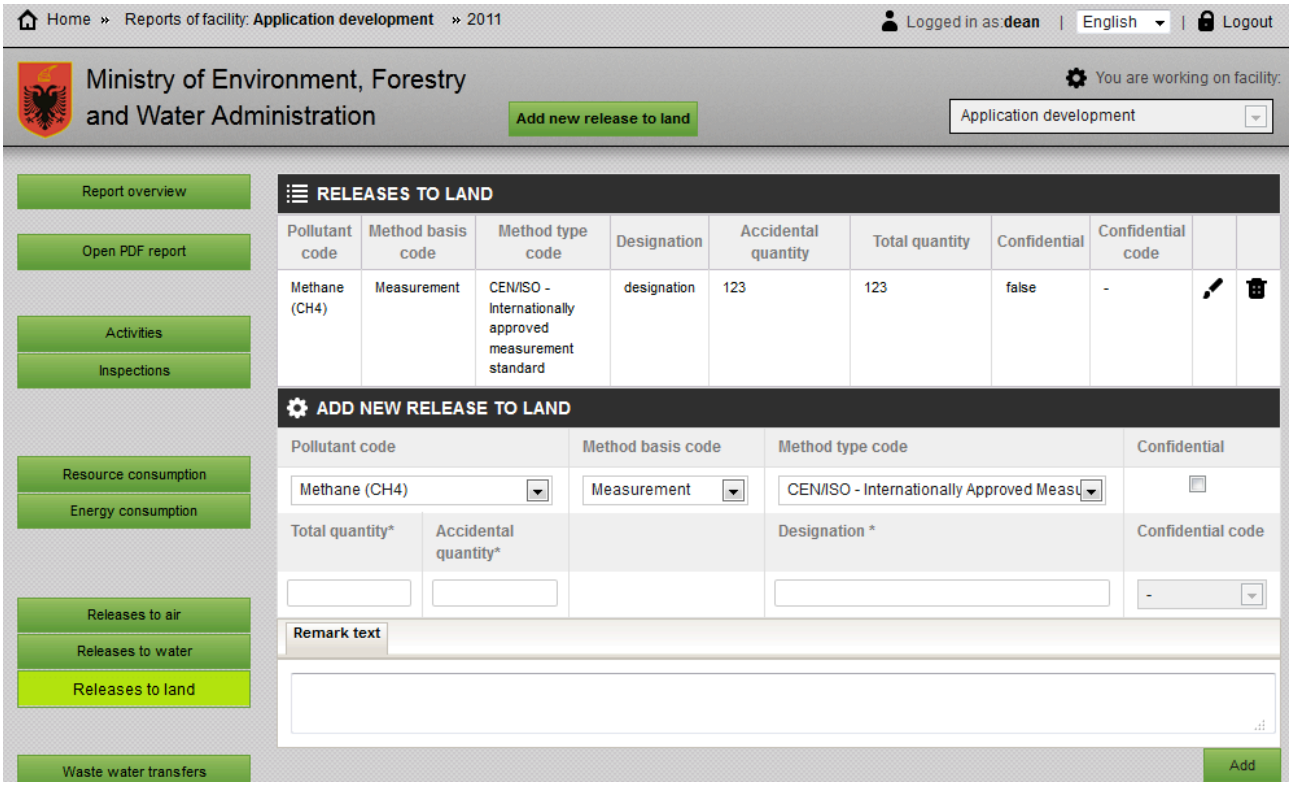
Releases to water page behaves identically as releases to air (see [Releases to air]) with only difference that the possibility to enter the “diffuse quantity” is not present within releases to water.

6.6.11 RELEASES TO LAND

Shkarkimet në tokë klasifikohen si elementë mesatarë të *Shkarkimit të Ndotësve në tokë* të XML-së të paraqitur RETSHN-së.



Releases to land are categorized as *land* medium *Pollutant Release* elements of the XML submitted to E-PRTR.

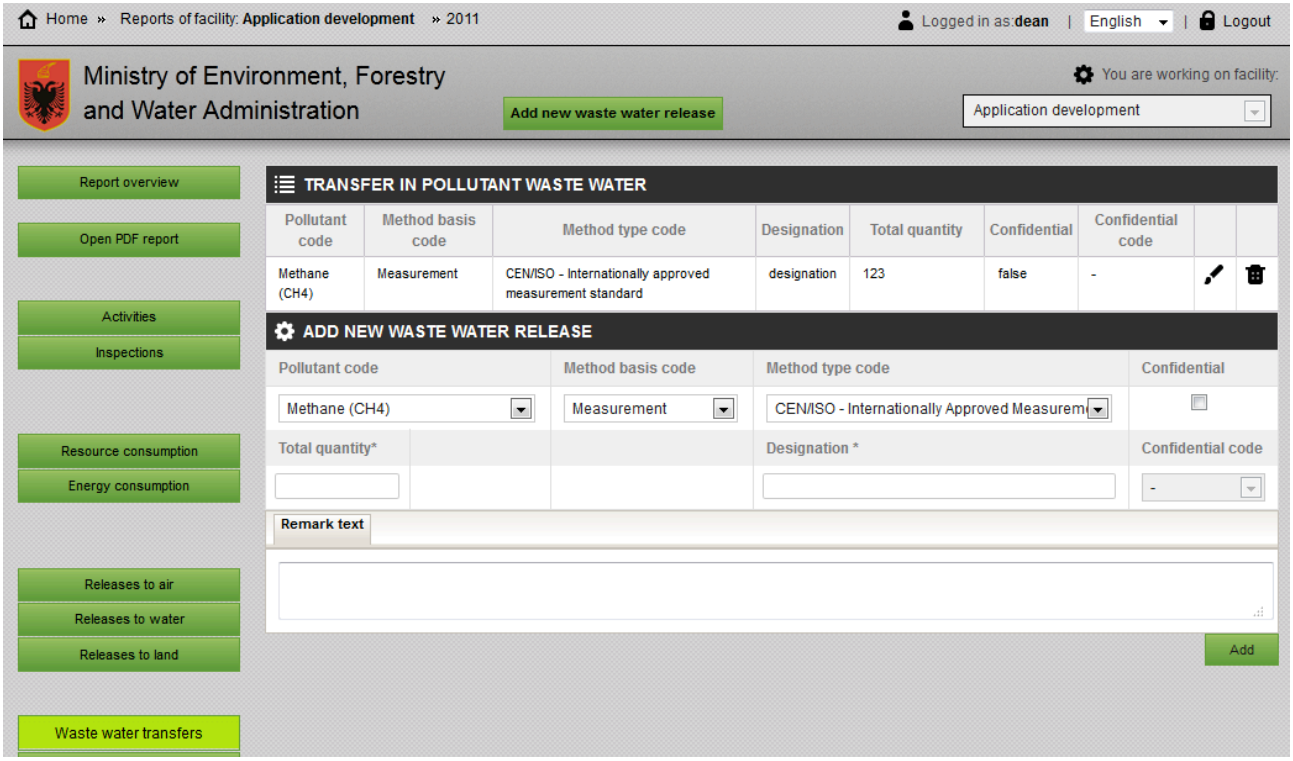


Releases to land page behaves identically as releases to air (see [Releases to air]) with only difference that the possibility to enter the “diffuse quantity” is not present within releases to land.

6.6.12 WASTE WATERS TRANSFER

Waste water transfers are converted as *Pollutant transfer type* of the exported E-PRTR XML.

Waste water transfer of pollutants means the movement beyond the boundaries of a facility of pollutants in waste water destined for waste-water treatment including industrial waste water treatment. The waste water transfer may be carried out via a sewer or any other means such as containers or (road)tankers).



6.6.13 WASTE TRANSFERS

Waste transfers are converted as *Waste transfer type* of the exported E-PRTR XML.

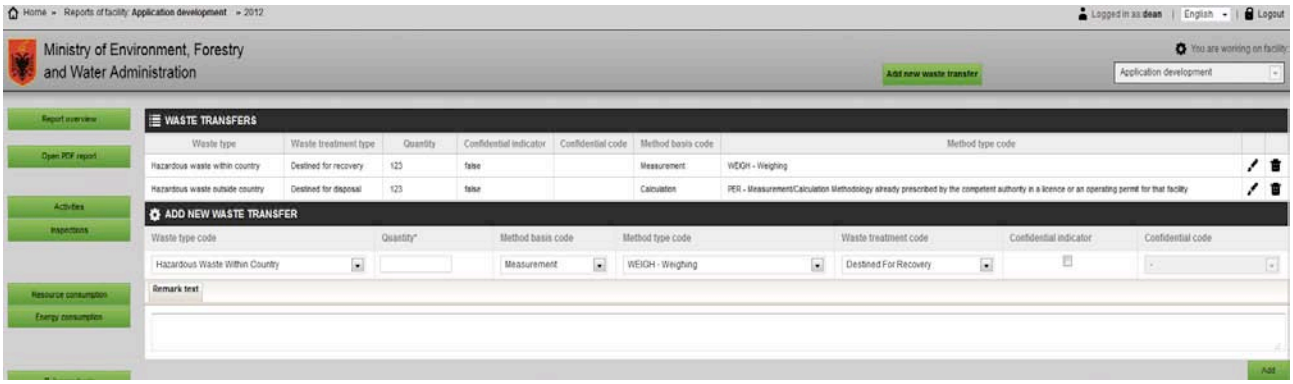
Waste transfers represent the movement beyond the boundaries of a facility of waste destined for disposal or recovery.

Operators shall report waste transfers of:

- hazardous waste (HW)
- non hazardous waste (non-HW)

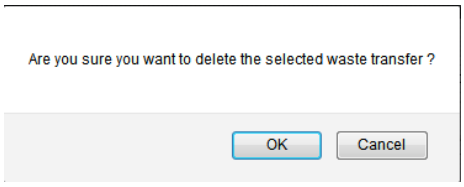
For any operations of recovery or disposal with the exception of the disposal operations of land treatment and deep injection, as these have to be reported as releases to land.

All data have to be expressed in tones/year and with three significant digits.



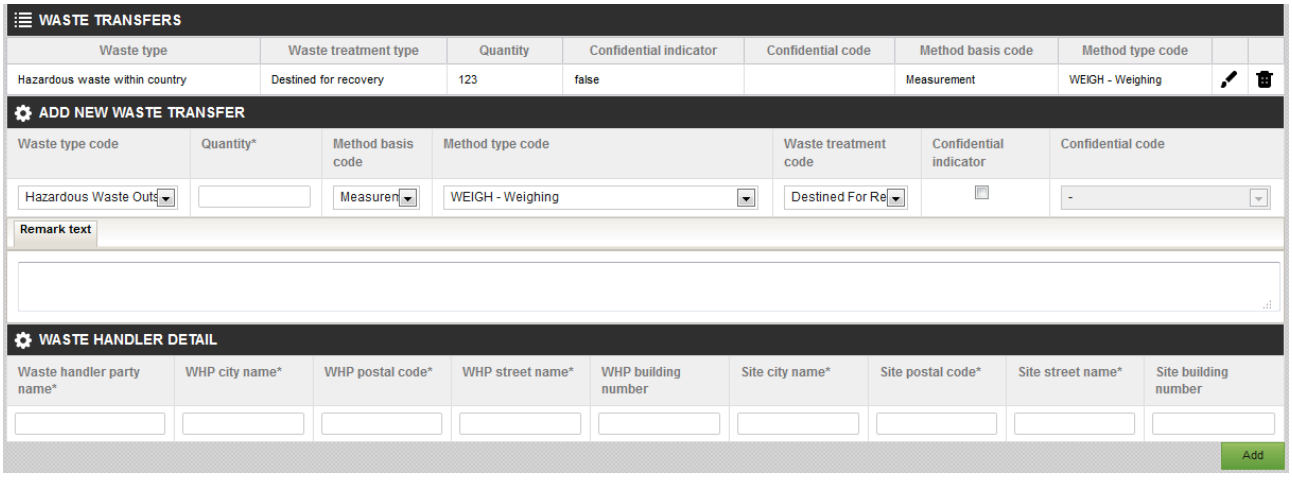
Waste transfers table can be used to either:

- Edit the existing waste transfer by clicking on link on the desired row or
- Start adding a new waste transfer by clicking on Add new waste water release button in the upper (header) part of the page.
- Additionally, waste transfers can be deleted by clicking on button on the desired row. Following dialog needs to be confirmed in that case:



For transboundary movements of hazardous waste, the name and address of the recovered or the disposer of the waste and the actual recovery or disposal site have to be reported.

For that reason additional “Waste handler detail” table will appear on the bottom of the page if “Hazardous Waste Outside Country” is selected as waste type code.



The information on waste handler detail is mandatory only in case waste transfer have the “hazardous waste outside country” as waste type code.

The “quantity” field of the “Waste transfers” table must be expressed with three significant digits (“3 significant numbers”) format. Following examples are valid quantities: "0.00", “123", "1230", "12300", "123." , "12.3", "12.0", "10.0", "1.23", "1.20", "1.00", "0.123", “0.120", "0.100", "0.0123", "0.0120",

"0.0100", "0.0123", "1.55", "7070", "123", "1000" etc.

Examples of invalid quantities are: "", "a", "1234","1234.", "12", "12340", "1", "1.0", "1.001", "1.1", "0", "0.", "0.0" etc.

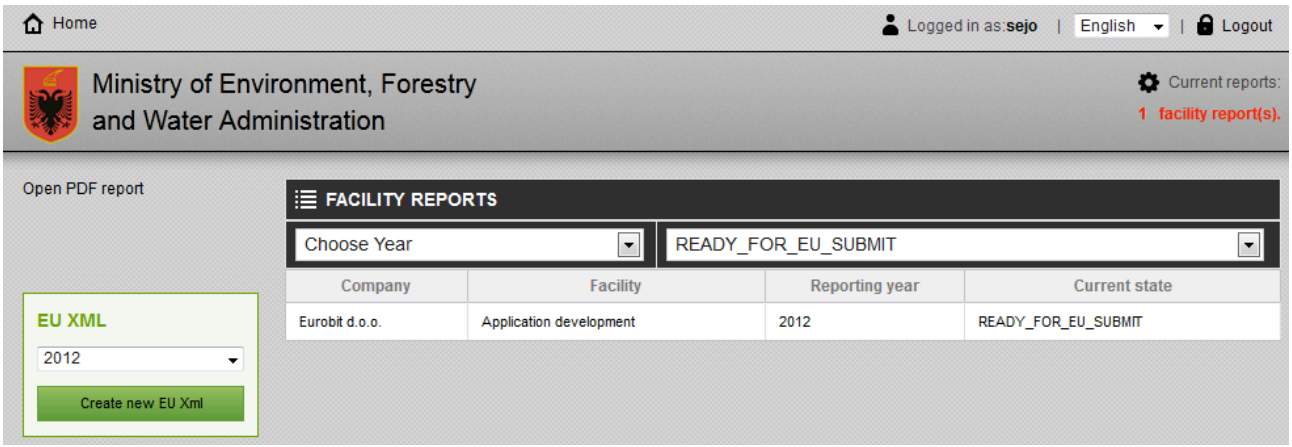
6.6.14 DELETE FACILITY REPORT

Pressing the "Delete facility report" button will permanently remove the facility report from the system and navigate user back to the overview of facility reports for the facility he or she is working on.

Note that delete facility report button will be presented to the user *only if a user has the FACILITY_INPUT role and when the facility report is in state DRAFT*..

6.7 MINISTRY FACILITY REPORTS OVERVIEW

Users with ministry roles are allowed to access the "ministry facility reports overview" page



Presented in the table on the right side are all nationwide facility reports with possibility of filtering the presented view according to:

- Year is the reporting year of the facility report. Only years that can be found within existing facility reports of the system are present in this filter.
- State is the current state of the facility report. Only states currently used as *current state* within existing facility reports of the system are present in this filter. If applicable, this filter can also contain a "MINISTRY_TO_DO" entry used to look for facility reports with current state equal to "READY_FOR_EU_SUBMIT" and "APPROVED".

System will query the database and present new results each time any of those filters is changed.

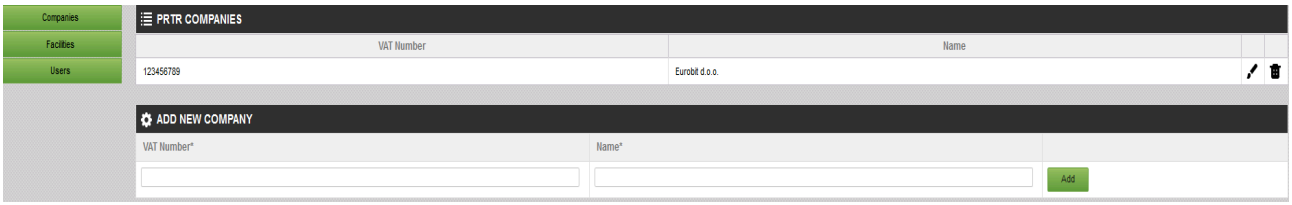
Left side of "ministry facility reports overview" page consists of reporting and XML export possibilities. The menu "EU XML" will be visible only to users with role "MINISTRY_APPROVE" and only if at least one facility report with state "READY_FOR_EU_SUBMIT" exists. In that case, user can choose a year for which EU XML should be generated. The choice of possible years is based on reporting years found in facility reports with current state equal to "READY_FOR_EU_SUBMIT".

Pressing the "Create new EU XML" button will then generate the XML consisting of facility reports with reporting year equal to the selected year and with state equal to "READY_FOR_EU_SUBMIT".

6.8 ADMINISTRATION MODULE

6.8.1 COMPANIES

Companies page allows the administrator of the system (users with role “ADMIN”) to manage information regarding companies that are defined within PRTR Entry Module (PEM).



Companies table can be used to either:

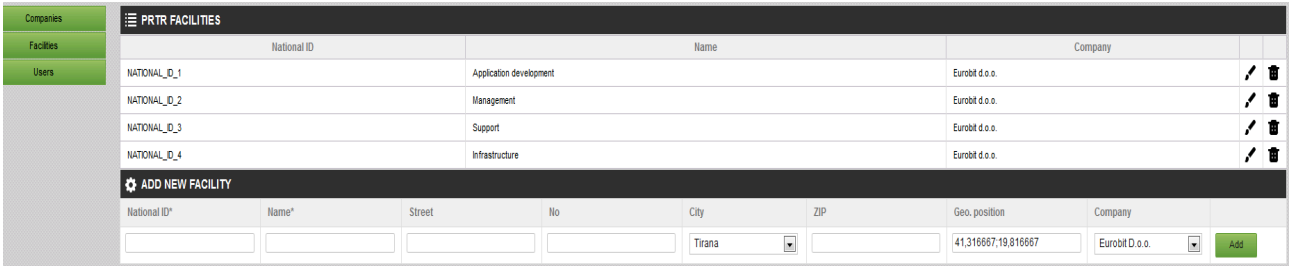
- Edit the existing company by clicking on link on the desired row or
- Start adding a new company by clicking on “Add new company” button in the upper (header) part of the page.
- Additionally, companies can be deleted by clicking on button on the desired row. Deletion of a PEM company will result in:
    - Permanent removal of that company
    - Permanent removal of all facilities connected to this company
    - Permanent removal of all facility reports connected to the above facilities

Editing or creation of a new or existing company complies with following rules:

- VAT Number is mandatory field
- Name is mandatory field

6.8.2 FACILITIES

Facilities page allows the administrator of the system (users with role “ADMIN”) to manage information regarding facilities that are defined within PRTR Entry Module (PEM).

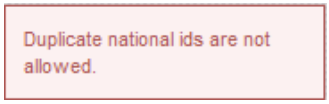


Facilities table can be used to either:

- Edit the existing facility by clicking on link on the desired row or
- Start adding a new facility by clicking on “Add new facility” button in the upper (header) part of the page.
- Additionally, facilities can be deleted by clicking on button on the desired row. Deletion of a PEM facility will result in:
    - Permanent removal of that facility
    - Permanent removal of all facility reports connected to that facility

Editing or creation of a new or existing facility complies with following rules:

- National ID is mandatory field and must be unique within PEM. Attempt to save a National ID to already existing one will produce an error:



- Name is mandatory field
- Geo position is a required field representing the geographical coordinates of the facility and is, as such, used by various visualization applications (e.g. map based visualization available on http://prtr.ec.europa.eu/).

  By default, the coordinates of each facility is set to "41,316667;19,816667" which is the geographical position of Tirana (according to http://en.wikipedia.org/wiki/Tirana) according to "EPSG:4326" coordinating system that is currently set as standard within the application. The coordinates of the location of the facility *should* be expressed in longitude and latitude coordinates giving a precision of the order of at least ± 500 meters and referring to the geographical centre of the site of the facility. The longitude (number before the ';' sign) must be in the interval [-180; 180]. The latitude (number after the ';' sign) must be in the interval [-90; 90].
- Company is a selection of existing PEM companies to which the given facility is related to.

6.8.3 USERS

Users page allows the administrator of the system (users with role "ADMIN") to manage information regarding users that are defined within PRTR Entry Module (PEM).

Users table can be used to either:

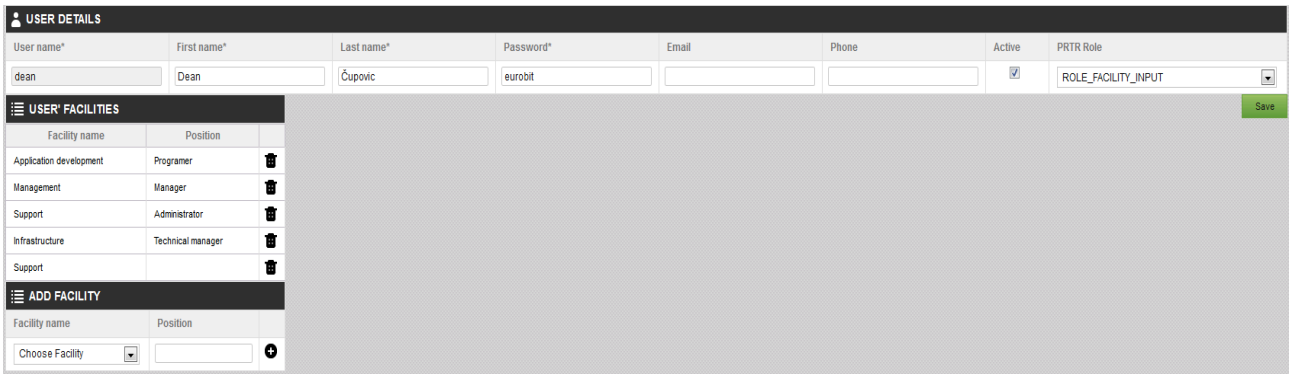
- Edit the existing user by clicking on link on the desired row or
- Start adding a new user by clicking on "Add new user" button in the upper (header) part of the page.
- Additionally, users can be deleted by clicking on button on the desired row. Deletion of a PEM facility will result in:
  - Permanent removal of that user

  Users that have created any existing facility report or changed the state of any existing facility report cannot be removed from the system as long as these reports are present in the system. For those users, the button will be disabled.

When "edit" of an existing user is selected, additional table will appear on the left lower side; this table allows the administrator to assign the chosen user (by clicking on button) to any existing facility with

a (optional) “position” field describing the position of the user in the facility.

Removal of the link between user and the facility is also possible by clicking on button



7 TECHNOLOGY

PRTR Entry Module (PEM) is a web-based application developed in Java programming language. As such, it can be engaged on almost any operating system and web server containers. Current instance of PEM is installed on Tomcat.

Additionally, PEM manages its data by using database independent object relational mapping tool Hibernate. Currently, PEM uses MySql as underlying database.

8 TROUBLESHOOTING

Following are general advises that can help users to avoid problems common to usage of web based applications. It is recommended to have them in mind prior to using the system and/or reporting any potential defects to the administrator.

- It is not recommended to use the “back” functionality (e.g. clicking the back button) of the web browser. If previously viewed page is needed, usage of so called “breadcrumb trail” in the left upper part of pages should be sufficient.
- In case user does not actively use the application for some time after the login, the system will terminate his/her session which can lead to unpleasant surprises since session termination also means deletion of all unsaved data. Session termination also means that the user must login again in order to use the application.
- Do not double click hyperlinks. In fact, do not click on anything during the request progress of the last click. In case that the application does not respond promptly (due to overload of the system or slow network connection), browser normally shows that the request that has been made is still in progress. Double clicking on the desired link will certainly not help. Even worse, if a link that is clicked is generating changes to the data in the system, double clicking can introduce errors in the data.
- It is always a good practice to close all browsers and retry before reporting any kind of error related to usage of the application.
- Do not create several user sessions with the same browser (type) on the same machine. Even if several windows of the browser are opened, each with its own user session in the application, it is not guaranteed that some browsers will respect the separation of these sessions. In other words, data from one session might appear in another one and vice versa. However, logging twice with another browser should not create any problems.
- Avoid bookmarking “detail pages” of the application. Bookmarking of the application should be done with welcome page or any other *context unaware* page. It is not advised to bookmark pages where details of facility or facility report are displayed. Opening the application with this kind of bookmark will lead to pages with missing content and can be confusing.

CONSOLIDATING THE ENVIRONMENTAL MONITORING SYSTEM IN ALBANIA

A project funded by the European Union and managed by the Delegation of the European Commission to Albania

MANUALI I PËRDORIMIT TË PRTR – ALBANIAN VERSION

CEMSA

CEMSA Project

EuropeAid/128449/C/SER/AL – IPA 2008

September 2012

DISCLAIMER

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TABLE OF CONTENT

1 HYRJE

1.1 OBJEKTIVAT

1.1.1 RETSHN

Regjistri Europian për Transferimin dhe Shkarkimin e Ndotësve (RETSHN) është një regjistër mbarëeuropian që ofron të dhëna kyçe mjedisore të aksesueshme nga shërbimet/institucionet industriale në Shtetet Anëtare të Bashkimit Europian dhe vende të tjera.

Për secilin institucion informacioni jepet në lidhje me sasitë e shkarkimeve të ndotësve në ajër, ujë dhe tokë , si dhe transferimet jashtë vendit dhe të ndotësve në ujëra të ndotura nga një listë prej 91 ndotësish kryesorë, duke përfshirë metalet e rënda, pesticidet, gazet e serave dhe dioksinat. Informacioni në lidhje me shkarkimet nga burime të pacaktuara është gjithashtu i disponueshëm.

Regjistri kontribuon në *transparencën dhe pjesëmarrjen publike në vendimmarrjen mjedisore*. Ai zbaton për Komunitetin Europian UNECE (Komisioni Ekonomik i Kombeve të Bashkuara për Europën) Protokollin e RTSHN-së të Konventës së Aarhusit mbi Aksesin në Informacion, Pjesëmarrjen Publike në Vendimmarje dhe Aksesin në Drejtësi për Çështjet Mjedisore.

Raportimi i të dhënave të RETSHN-së Komisionit Europian kryhet me anë të shkarkimit të raporteve të të dhënave në Arkivën Qendrore të të Dhënave (AQDH) të faqes së Agjencisë Europiane Mjedisore Reportnet.

Me qëllim që Shtetet Anëtare të vlerësojnë të dhënat e RETSHN-së përpara shkarkimit në AQDH, një instrument vlerësimi jepet në: http://www.eionet.europa.eu/schemas/eprtr/validationtool.

1.1.2 MHP

Ky dokument përshkruan aplikimin e quajtur “Moduli Hyrës i RTSHN-së” (MHP), qëllimi kryesor i të cilit është lehtësimi i *mbledhjes së informacionit të RETSHN-së* brenda institucioneve shqiptare dhe si rezultat, gjenerimi automatik i përfaqësimit XML të raporteve të të dhënave *të pranueshme nga AQDH*.

MHP është një aplikim i bazuar në rrjet që i jep mundësinë përdoruesve të tij të përdorin informacion në lidhje me:

- Raportet e të dhënave. Raporti i të dhënave është produkti kryesor i MHP-së që përmban të gjitha të dhënat përkatëse mjedisore për një institucion gjatë një viti.
- Institucionet.
- Shoqëritë që i korrespondojnë institucioneve
- Përdoruesit e sistemit dhe rolet e tyre përkatëse.

Kapitujt e mëposhtëm janë përshkrim i detajuar i funksionimit të MHP-së. Për më shumë informacion në lidhje me RETSHN në përgjithësi, duhet të konsultohet “Manuali i Përdoruesve të RETSHN-së” (http://www.eionet.europa.eu/schemas/eprtr/EPRTRUserManual.pdf).

2 PËRKUFIZIMI I RAPORTIT TË TË DHËNAVE

Raporti i të dhënave i modulit hyrës të RTSHN-së (MHP) përfaqëson grumbullimin e informacioneve të ndryshme që përkufizojnë shkarkimet dhe transferimet e ndotësve për një institucion të caktuar gjatë një viti të caktuar. Duke filluar nga krijimi i tij dhe hyrja e të dhënave nga përdoruesit e të dhënave deri në paraqitjen pranë zyrave të RTSHN-së të BE-së nga përdoruesit e ministrive, secili raport të dhënash ndjek të ashtuquajturin *proces kontribuues të raportit të të dhënave*. Siç do të diskutohet më tej, secila fazë e këtij procesi përkufizohet dhe menaxhohet nga sistemi.

2.1 PËRMBAJTJA E RAPORTIT TË TË DHËNAVE

10 seksionet e ardhshme përkufizojnë përmbajtjen e secilit raport të dhënash të MHP-së:

- Informacion i përgjithshëm mbi raportin e të dhënave. Shembuj: viti i raportimit, kodi i rajonit të ujëmbledhësit, emri i produktit etj.
- Aktivitetet
- Inspektimet
- Konsumet e burimeve
- Konsumet e energjisë
- Shkarkimet në ajër
- Shkarkimet në ujë
- Shkarkimet në tokë
- Transferimet e ujit të ndotur
- Transferimet e mbetjeve

Secili prej seksioneve të mësipërme përshkruhet hollësisht në [raportin e të dhënave]

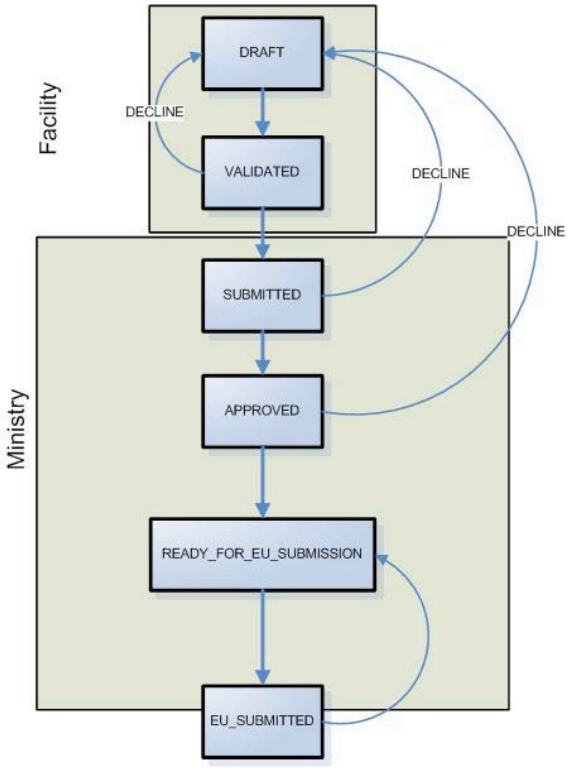
2.2 STATUSI I RAPORTIT TË TË DHËNAVE

Përveç sa u përmend më sipër, secili raport të dhënash i MHP-së përmban informacion mbi "*statusin" aktual*. Statusi i raportit të të dhënave përdoret për të gjurmuar *progresin e procesit kontribuues të raportit të të dhënave*. Në bazë të statusit aktual të një raporti të caktuar të të dhënash, sistemi mund të përcaktojë cilat masa mund të merren nga përdorues të caktuar (role) të përshkruar në [Përdoruesit].

Sa më poshtë janë statuset e raporteve të të dhënave: drafti, i vlerësuar, i paraqitur, i aprovuar, gati për paraqitje tek BE dhe i paraqitur pranë BE-së.

Të gjitha ndryshimet e statusit ruhen në historinë e ndryshimit të statusit dhe mund të shihen nga përdoruesit e MHP-së. Shembull: përdoruesit e të dhënave mund të shohin informacion në lidhje me kohën, nga cili dhe me cilin koment është kundërshtuar raporti i tyre.

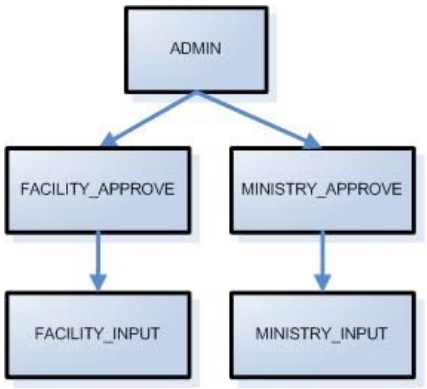
Diagrama e mëposhtme tregon statuset e mundshme dhe kalimet e statuseve që mund të ketë secili raport të dhënash i MHP-së.


Facility
Ministry
DRAFT
DECLINE
VALIDATED
DECLINE
DECLINE
SUBMITTED
APPROVED
READY_FOR_EU_SUBMISSION
EU_SUBMITTED

3 PËRDORUESIT

Rregulla të rrepta zbatohen në lidhje me vërtetimin dhe autorizimin e përdoruesve të MHP-së:

- Secili përdorues i MHP-së pajiset me një emër përdoruesi dhe fjalëkalim. Aksesi në sistem jepet vetëm nëse kombinimi ekzistues dhe i vlefshëm i emrit të përdoruesit dhe fjalëkalimit jepet në faqen e regjistrimit të MHP-së.
- Vetëm përdoruesit *aktivë* të MHP-së me të paktën një *rol* mund të hyjnë në sistem.
- Secilit përdorues të MHP-së mund t'i caktohen disa "role".
- Në varësi të rolit (eve) të caktuar/a dhe gjendjes aktuale të informacionit (për shembull raporti i të dhënave), sistemi përcakton në mënyrë aktive cilat masa lejohen të merren nga përdoruesi në një kohë të caktuar.
- Rolet e MHP-së janë hierarkike, siç tregohet në imazhin e mëposhtëm. Rolet me hierarki më të lartë trashëgojnë automatikisht të gjitha të drejtat e roleve që janë nën to. Për shembull: ADMIN ka të gjitha të drejtat e MINISTRY_APPROVE dhe FACILITY_APPROVE (APROVIMIT TË MINISTRISE DHE APROVIMIT TË SHËRBIMIT/INSTITUCIONIT).



Përdoruesit e Modulit Hyrës të RTSHN-së (MHP) mund të klasifikohen në tre kategori:

- Përdoruesit e të dhënave
- Përdoruesit e Ministrive
- Administratori(ët)

Paragrafët e mëposhtëm përshkruajnë hollësisht këto kategori.

4 PËDORUESIT E TË DHËNAVE

Përdoruesit e të dhënave janë personat përgjegjës për krijimin dhe futjen e informacionit vjetor të raportit të të dhënave (për shembull, transferimet e mbetjeve) përpara se t'i paraqesë për rishikim të mëtejshëm dhe trajtim nga personeli i ministrisë. Për përdoruesit e të dhënave ekzistojnë rolet e mëposhtme të MHP-së:

- FACILITY_INPUT (INPUTI I SHËRBIMIT). Përdoruesit që kanë këtë rol lejohen të:
  - Ndryshojnë detajet në lidhje me informacionin e institucionit (adresa, lejet etj.)
  - Hartojnë raport të ri mbi të dhënat
  - Prezantojnë informacion në raportin mbi të dhënat
  - Ndryshojnë statusin e raportit mbi të dhënat në "I VLERËSUAR" dhe sërish në statusin e tij fillestar "DRAFT"
  - Nxjerrin raporte në formatin PDF
  - Fshijnë raportin e të dhënave nëse statusi i tij aktual caktohet si "DRAFT".
- FACILITY_APPROVE (APROVIMI I SHËRBIMIT). Përdoruesit që kanë këtë rol lejohen të:
  - Ndryshojnë statusin e raportit të të dhënave nga "I VLERËSUAR" në "I PARAQITUR".
  - Ndryshojnë statusin e raportit të të dhënave në statusin e tij fillestar "DRAFT".
  - Kryejnë të gjitha veprimet sipas kushteve të njëjta si INPUTI I SHËRBIMIT.

4.1 PËRDORUESIT E MINISTRISË

Përdoruesit e ministrisë janë përgjegjës për trajtimin e raporteve vjetore të të dhënave pas dorëzimit të tyre nga institucionet. Objektivi përfundimtar është krijimi i përfaqësimit XML për një vit të zgjedhur dhe dërgimi i XML të gjeneruar zyrave Europiane të RTSHN-së. Për përdoruesit e ministrisë ekzistojnë rolet e mëposhtme të MHP-së:

- MINISTRY_INPUT (INPUTI I MINISTRISË). Përdoruesit që kanë këtë rol lejohen
  - Të ndryshojnë statusin e raportit të të dhënave nga "I PARAQITUR" në "I APROVUAR"
  - Të ndryshojnë statusin e raportit të të dhënave në statusin e tij fillestar "DRAFT"
  - Të nxjerrin raporte në formatin PDF
  -
- MINISTRY_APPROVE (APROVIMI I MINISTRISË). Përdoruesit që kanë këtë rol lejohen :
  - Të ndryshojnë statusin e raportit të të dhënave nga "I APROVUAR" në "GATI PËR PARAQITJE_PRANË_BE-së"
  - Të ndryshojnë statusin e raportit të të dhënave nga "GATI PËR PARAQITJE_PRANË_BE-së"" në "I DORËZUAR_PRANË_BE-së"
  - Të nxjerrin XML vjetore të përputhshme me BE-në për raportet e të dhënave me status "GATI PËR PARAQITJE_PRANË_BE-së ".
  - Të kryejnë të gjitha veprimet sipas kushteve të njëjta si INPUTI I MINISTRISË.

4.2 PËRDORUESIT ADMNISTRUES

Administratorët janë përdorues të MHP-së që kanë rol "ADMIN". Si të tillë, ata mund të kenë akses në modulin e administrimit të aplikimit dhe të menaxhojnë informacion në lidhje me:

- Krijimin, ndryshimin/redaktimin dhe heqjen e shoqërive të MHP-së

- Krijimin, ndryshimin/redaktimin dhe heqjen e institucioneve të MHP-së, si dhe marrëdhënien e tyre me shoqëritë përkatëse
- Krijimin, ndryshimin/redaktimin dhe heqjen e përdoruesve të MHP-së. Menaxhimi i roleve të përdoruesve si dhe marrëdhënia me institucionet e tyre është gjithashtu pjesë e detyrave të administratorit.

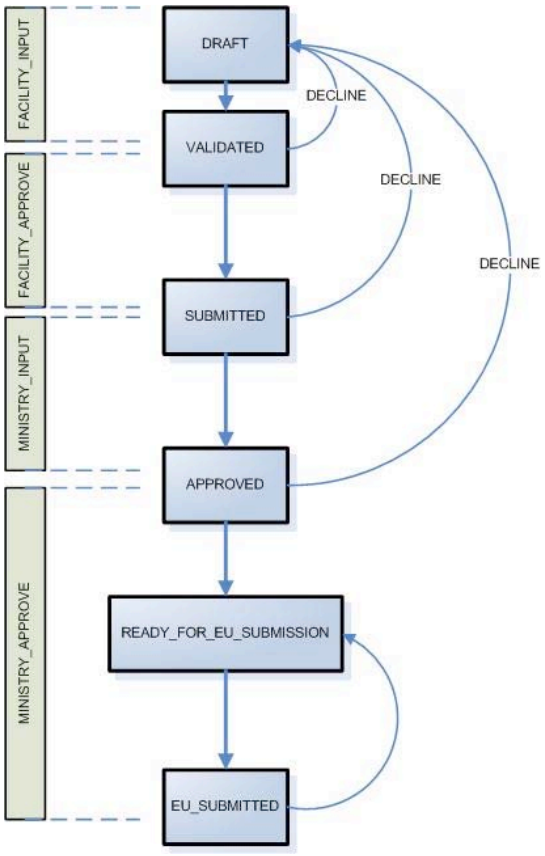
Mbi të gjitha, administratorët mund të kryejnë veprime nën kushte të njëjta si MINISTRY_APPROVE dhe FACILITY_APPROVE.

Me fjalë të tjera, *të gjitha veprimet e mundshme* në MHP mund të kryhen nga administratori. Në veçanti, veprimet që i përkasin modulit të administrimit mund të kenë pasoja negative. Si shembull; heqja e institucionit ose shoqërisë ekzistuese do të çojë në heqjen e të gjitha raporteve të të dhënave në lidhje me institucion/e të caktuar/a.

Rrjedhimisht, është e rëndësishme të zgjidhet me kujdes kush do të jetë administratori dhe ai ose ajo duhet të kujdesen për fshehtësinë e fjalëkalimit të administratorit.

4.3 PËRMBLEDHJA

Diagrama e mëposhtme përfaqëson një përmbledhje të rregullave të autorizimit të rolit të MHP-së në lidhje me menaxhimin e raportit të të dhënave.



5 KËRKESAT E SISTEMIT

Kërkesa kryesore për përdorimin e Modulit Hyrës të RTSHN-së (MHP) është lidhja e rrjetit me serverin ku MHP është instaluar dhe funksionon. MHP mund të aksesohet nga të gjithë brauserat/shfletuesit e njohur të faqeve të internetit (Firefox, Chrome, Internet Explorer etj).

Me kontaktimin e administratorit të sistemit, URL (e serverit ku është instaluar MHP), mund të jepet emri i përdoruesit dhe fjalëkalimi.

Programi Adobe Acrobat Reader duhet të instalohet me qëllim leximin e raporteve në PDF që mund të nxirren nga sistemi.

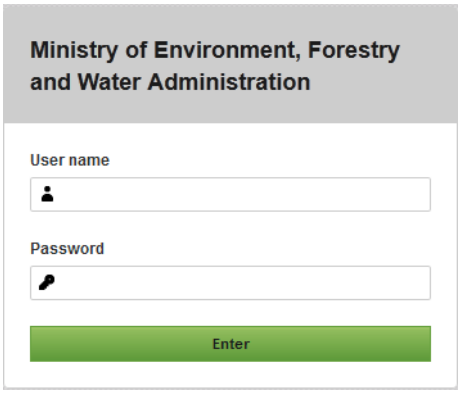
6 MODULI I HYRJES I RTSHN SE

6.1 TË PËRGJITHESHME

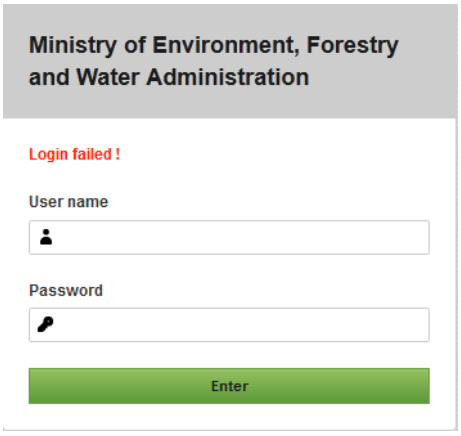
Paragrafët e mëposhtëm përshkruajnë funksionimin e përgjithshëm të Modulit Hyrës të RTSHN-së (MHP) të aksesueshëm nga të gjithë përdoruesit.

6.1.1 FAQJA E REGJISTRIMIT

Pasi kërkohet hapja e aplikimit (duke futur URL në brauser ose duke ndjekur linkun), faqja e regjistrimit do të shfaqet siç tregohet më poshtë. Aksesi në aplikim mund të arrihet vetëm nëse jepet kombinimi ekzistues dhe i vlefshëm i emrit të përdoruesit dhe fjalëkalimit.



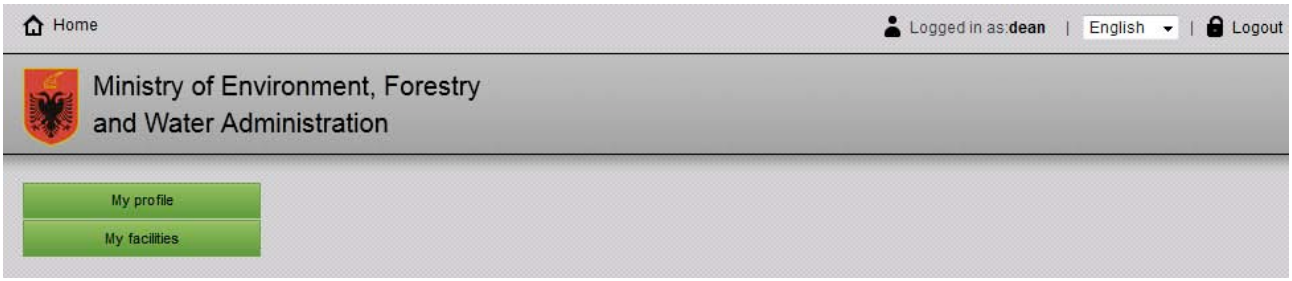
Në rast të mosregjistrimit, një faqe e ngjashme do të rishfaqet me mesazh për identifikimin e gabimit:



Nuk ka kufij në numrin e përpjekjeve që një përdorues mund të bëjë ndërsa përpiqet të regjistrohet me sukses në sistem.

6.1.2 FAQJA KRYESORE

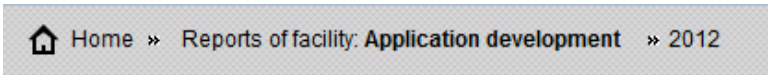
Çdo regjistrim i suksesshëm pasohet nga shfaqja e të ashtuquajturës faqe “kryesore” e aplikimit:



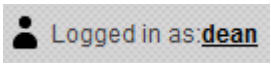
6.1.3 PJESA E SIPËRME E FAQES KRYESORE

Shumica e elementëve të pjesës së sipërme (kryesore) të faqes kryesore janë të pranishme në të gjitha faqet e tjera të aplikimit. Mundësitë janë si më poshtë:

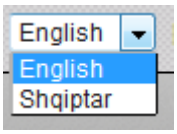
- Hiperlinku “Home” do ta kthejë përdoruesin në faqen e tij/të saj kryesore
- I ashtuquajturi “breadcrumb trail” (një tip skeme dytësore navigimi që zbulon vendndodhjen e përdoruesit në një faqe interneti) do të shtohet ose hiqet në mënyrë dinamike në linkun “Home”, në varësi të faqes në të cilën përdoruesi është aktualisht. Shembull i breadcrumb trail për një përdorues që është duke parë një raport të dhënash për vitin 2012 të shërbimit të quajtur ‘Zhvillimi i aplikimit’ është:

  Secili element i breadcrumb trail është i klikueshëm dhe e kthen përdoruesin në faqen përkatëse. Në këtë shembull: klikimi tek “Application development” (“Zhvillimi i Aplikimit”) do të hapë faqen përmbledhëse të të dhënave të quajtur “Application development” (“Zhvillimi i Aplikimit”).
- Emri i përdoruesit i paraqitur në pjesën “logged in as” (“i regjistruar si”) është gjithashtu një hiperlink që i paraqet përdoruesit “User profile page” (“Faqja e profilit të përdoruesit”).

  Detaje të kësaj faqeje përshkruhen më tej në [My profile] [Profili im].
- Kutia e gjuhës në pjesën e poshtme i mundëson përdoruesit të përzgjedhë gjuhën në të cilën prezantohet aplikimi. Aktualisht, gjuha shqipe dhe angleze janë gjuhët e mbështetura:

  Ndryshimi i gjuhës në mënyrë aktive përkthen faqen në të cilën përdoruesi mund të jetë atë moment dhe cakton gjuhën e re si gjuhën e zgjedhjes për kohën e mbetur të sesionit të përdoruesit.
- Logout” (“Çregjistrimi nga faqja”) është një hiperlink që do të çojë në përfundimin e sesionit të përdoruesit dhe e prezanton përdoruesin me ekranin e regjistrimit.

Pas klikimit në këtë link, përdoruesi duhet të regjistrohet sërish për të përdorur sistemin.

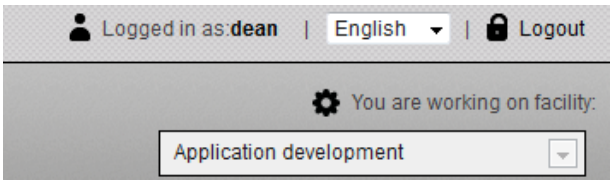
- Në rast se administratori është regjistruar, pjesa e sipërme e faqes kryesore zgjerohet me linkun shtesë “Admin” që përshkruhet më poshtë.

Ky link e prezanton përdoruesin me modulin e administrimit të aplikimit. Moduli i administrimit përshkruhet hollësisht në [Administration Module] [Moduli i Administrimit].

- Në rast se përdoruesi me *rolet e ministrisë* është regjistruar, linku shtesë mund të shfaqet në cepin e djathtë të pjesës së sipërme të faqes kryesore:

Ky link do të jetë i dukshëm për përdoruesit e ministrisë vetëm në rast se të paktën një raport të dhënash (nga ndonjë institucion) është i pranishëm me një prej statuseve të mëposhtme si statusi i tij aktual: I PARAQITUR, I APROVUAR dhe GATI_PËR_PARAQITJE_PRANË BE-së. Duke klikuar në këtë link, përdoruesi do të prezantohet me faqen “Facility reports” (“Raportet e të dhënave”). Kjo faqe (e përshkruar në [Raportet e të dhënave të Ministrisë]) normalisht e lejon përdoruesin të shohë të gjitha raportet e të dhënave në nivel kombëtar. Megjithatë, duke klikuar në këtë link, kjo faqe do të hapet me raporte të filtruara paraprakisht që kanë një prej statuseve nga lista e mësipërme si statusi aktual. Siç përshkruhet më vonë, këto 3 statuse njihen si mundësia e filtrit “MINISTRY_TO_DO” (“MINISTRIA VEPRUESE”) në atë faqe.

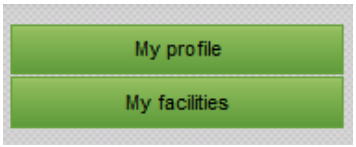
- Në rast se përdoruesi i të dhënave regjistrohet dhe ka përzgjedhur një shërbim të caktuar (për shembull shërbimi i quajtur “Application development” (“Zhvillimi i Aplikimit”) për të punuar, sa më poshtë do të shfaqet në pjesën e sipërme të djathtë të faqes:



6.1.4 STRUKTURA E FAQES KRYESORE

Pjesa e poshtme e (strukturës) së faqes kryesore përcaktohet në mënyrë aktive në varësi të rolit (eve) të përdoruesit.

Për përdoruesit me rol shërbimi (FACILITY_INPUT dhe/ose FACILITY_APPROVE), do të shfaqet menyja e mëposhtme:



- My profile" ("Profili im") i paraqet përdoruesit "User profile page" ("Faqja e Profilit të Përdoruesit"). Detaje të kësaj faqeje përshkruhen në [My profile] [Profili im].
- "My facilities" ("Shërbimet e mia") do të hapë një përmbledhje të shërbimeve të cilave i përket ky përdorues. Përmbledhja e shërbimeve përshkruhet hollësisht në [Përmbledhja e shërbimeve].

Për përdoruesit me role ministrie (MINISTRY_INPUT dhe/ose MINISTRY_APPROVE), do të shfaqet menyja e mëposhtme:

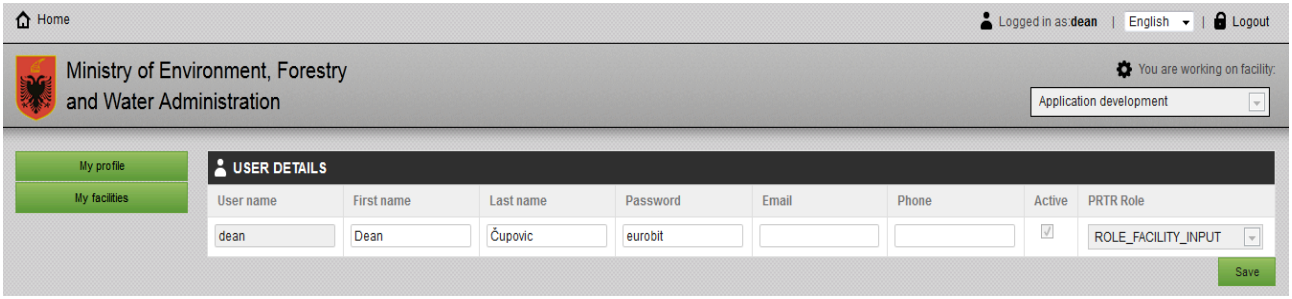
- My profile" ("Profili im") i paraqet përdoruesit "User profile page" ("Faqja e Profilit të Përdoruesit"). Detaje të kësaj faqeje përshkruhen më tej në [My profile] [Profili im].
- "Facility reports" ("Raportet e të dhënave") do të hapë një përmbledhje të të gjitha raporteve të të dhënave në nivel kombëtar. Përmbledhja e raporteve të të dhënave në nivel kombëtar në këtë faqe përshkruhet hollësisht në [Ministry facility reports] [Raportet e të Dhënave të Ministrisë].

- Për përdoruesit me rol administratori (ADMIN) do të shfaqet menyja e mëposhtme:

- Dy linqet e para janë identike me linqet e prezantuara për rolet e ministrisë. Linku i fundit "PRTR Administration"("Administrimi i RTSHN-së ") e çon përdoruesin në modulin e administrimit të përshkruar në [Administration Module][Moduli i Administrimit].

6.2 MY PROFILE (PROFILI IM)

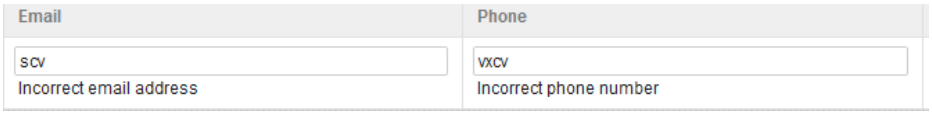
Faqja e profilit të përdoruesit i jep mundësinë përdoruesit të ndryshojë informacionin e tij ose të saj personal. Emri, mbiemri, fjalëkalimi, email-i dhe telefoni janë fushat që mund të ndryshohen. Emri i përdoruesit (i përdorur nga sistemi për identifikimin e përdoruesit), flamuri "aktiv" (vetëm përdoruesit aktivë mund të hyjnë në sistem) dhe roli aktual i përdoruesit nuk mund të ndryshohen në këtë faqe. Për ndryshime të këtyre fushave duhet të përdoret moduli i administrimit (shihni [Administration Module] [Moduli i Administrimit]) nga administratori i sistemit.



Asnjë nga fushat ku mund të ndërhyhet nuk është e detyrueshme. Megjithatë, fushat e mëposhtme do të kontrollohen për formatin e saktë kur klikohet butoni "Save" ("Ruani"):

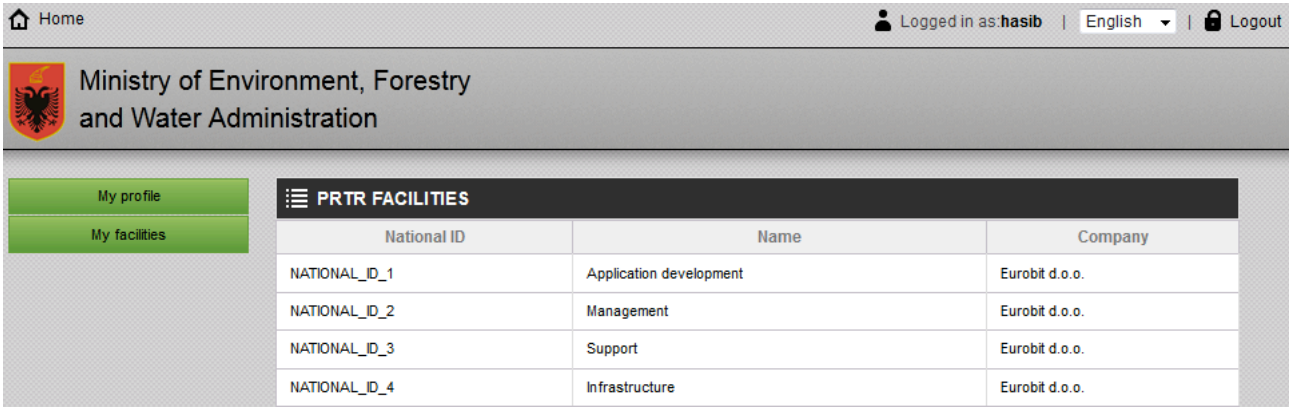
- Adresa e email-it duhet të jetë e saktë sipas përkufizimeve të emailit standard.
- Numri i telefonit duhet të përbëhet vetëm nga shifra dhe mund të ketë prefiks me një shenjë të vetme '+'.

Përpjekja për të ruajtur një version të pasaktë të email-it dhe/ose informacionit për telefonin do të çojnë në mesazh (e) të identifikimit të gabimit:

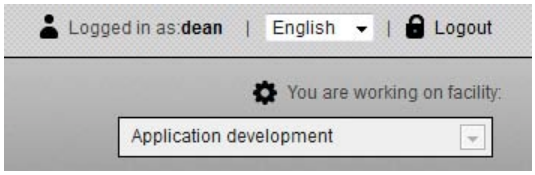


6.3 PËRMBLEDHJA E TË DHËNAVE

Përdoruesit e Modulit Hyrës të RTSHN-së (MHP) lejohen të kenë akses në shumë shërbime në sistem. Vetëm përdoruesit me rol administrues mund të ndryshojnë atë informacion. Pasi një përdoruesi i caktohet një ose më shumë të dhëna/shërbime, aksesi në këto të dhëna/shërbime (dhe raportet përkatëse) është i mundur nëpërmjet "Facilities overview page" ("Faqja e përmbledhjes të të dhënave").

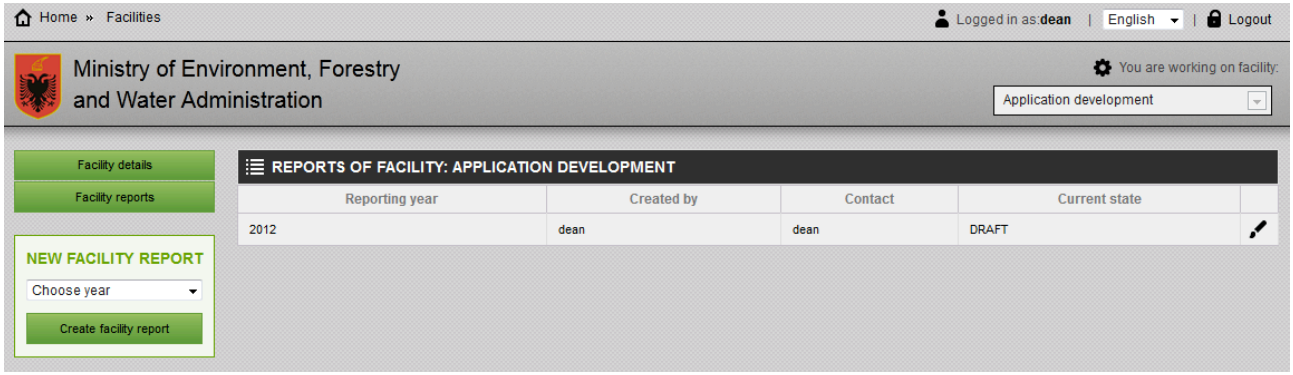


Kjo faqe paraqet një tabelë të klikueshme që tregon fushat kryesore (karta kombëtare e identitetit, emri dhe emri i Shoqërisë) të çdo përdoruesi të të dhënave/shërbimeve ku ka akses. Me anë të klikimit në një radhë/rresht të kësaj tabele, përdoruesi do të navigojë në faqen "Facility reports" ("Raportet e të dhënave) të shërbimit të përzgjedhur. Për më tepër, duke filluar nga momenti kur përdoruesi klikon në këtë faqe, ana e djathtë e pjesës së sipërme do të shfaqë informacion rreth shërbimit të zgjedhur siç përshkruhet më poshtë:



6.4 RAPORTET E TË DHËNAVE

Si alternativë, faqja “Facility reports” (“Raportet e të dhënave“) tregon listën e raporteve të të dhënave të shërbimit në të cilin po punon përdoruesi. Secili raport paraqitet me fushat e mëposhtme: viti i raportimit, i krijuar nga, kontakti dhe statusi aktual. Duke klikuar në një radhë/rresht të kësaj tabele, përdoruesi do të navigojë në faqen e raportit mbi të dhënat (shihni [Raporti mbi të dhënat]).



Përveç kësaj, butonat në anën e majtë i japin mundësinë përdoruesit të:

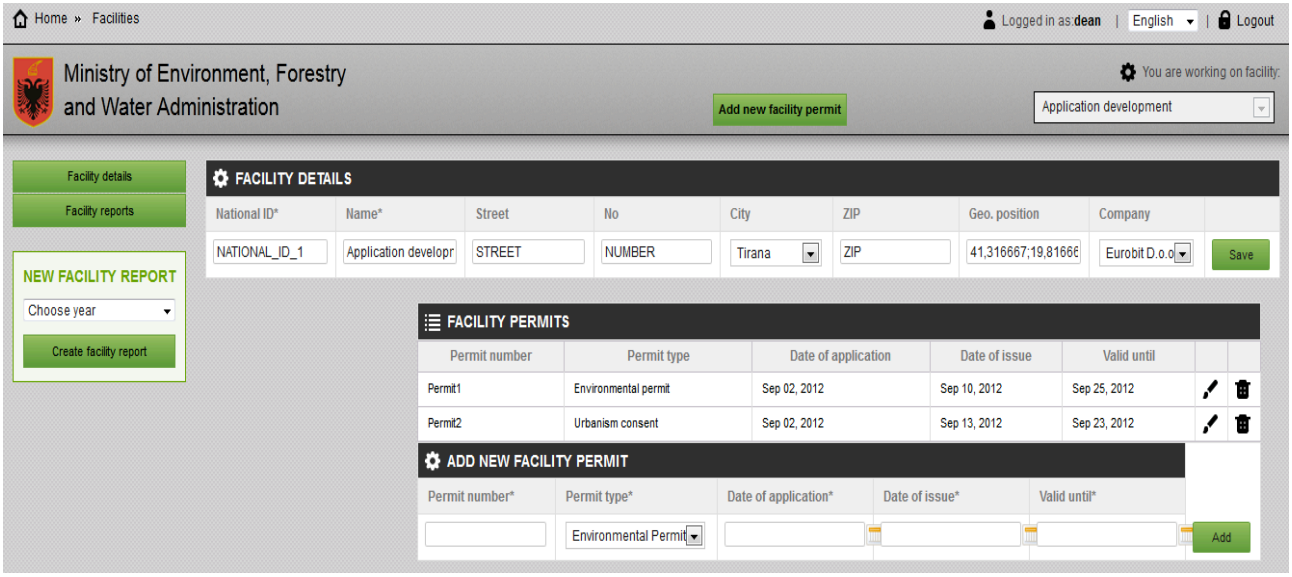
- Shfaqë ose rifreskojë listën e të gjitha raporteve ekzistuese të të dhënave në të cilat është duke punuar përdoruesi, duke klikuar butonin “Facility reports” (“Raportet e të dhënave”).
- Hyjë në faqen me informacione të hollësishme për shërbimin, duke klikuar butonin “Facility detail” (“Detaje mbi shërbimin”) (shihni informacione të hollësishme për Shërbimin]).
- Hartojë një raport të ri mbi të dhënat, të bazuar në përzgjedhjen e vitit nga menyja në pjesën e poshtme.
    - Përmbajtja e kësaj menyje në pjesën e poshtme krijohet në mënyrë aktive dhe përfaqëson të gjitha vitet jo më të hershme se 10 dhe që nuk kanë tashmë të përcaktuar ndonjë raport të dhënash. Nëse, për shembull, një raport është hartuar tashmë për vitin e fundit (dhe nëse është vetëm në statusin DRAFT), ai vit nuk do të jetë i disponueshëm për përzgjedhjen e hartimit të raportit të ri.
    - Pasi është përzgjedhur një vit, përdoruesi mund të klikojë në “Create facility report” (“Krijoni raportin e të dhënave”) për të krijuar një radhë/rresht të ri në tabelën e përmbledhjes së raporteve. Raporti i ri do të përmbajë informacionin e mëposhtëm:
        - Viti i raportimit (viti i përzgjedhur)
        - Krijuar nga (përdoruesi që shtypi butonin)
        - Statusi aktual caktohet në DRAFT.

Për të vazhduar punën për raportin e ri, përdoruesi duhet të klikojë radhën/rreshtin e krijuar rishtazi dhe të navigojë për informacione të hollësishme në lidhje me këtë raport.

6.5 DETAJE MBI SHËRBIMIN

Faqja me detaje në lidhje me shërbimin i jep mundësinë përdoruesit të ndryshojë informacionin e lidhur me shërbimin. Pjesa e parë e kësaj faqeje ("Detaje mbi shërbimin") përfaqëson informacionin kryesor për shërbimin dhe pjesa e dytë e poshtme ("Lejet e shërbimit") përfaqëson informacionin në lidhje me lejet e shërbimit.

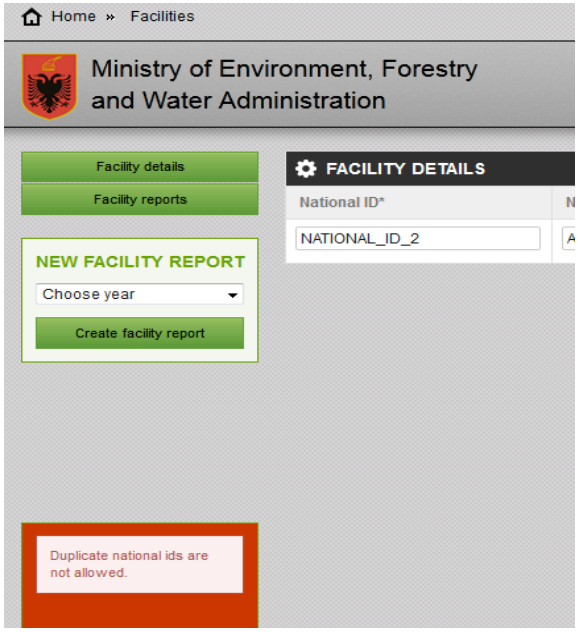
INFORMACIONI BAZË MBI SHËRBIMIN mund të ndryshohet duke shtypur butonin "Save" ("Ruani") në kolonën e fundit të tabelës së sipërme.



Informacioni kryesor për shërbimin përbëhet nga fushat e mëposhtme:

- Identiteti kombëtar.

  Identiteti kombëtare është një identifikues unik i shërbimit i përdorur për t'i komunikuar identifikimin e shërbimit Komisionit Europian. Përpjekja për të ndryshuar identitetin kombëtar në një identitet tjetër, tashmë ekzistues, kombëtar do të çojë në një gabim të shfaqur në anën e poshtme të majtë të faqes:



Për më tepër, ndryshimi në identitetin kombëtar të shërbimit do të çojë në ndryshimin e fushës "Creation national id" ("Krijimi i identitetit kombëtar") të çdo raporti që nuk i është paraqitur ende BE-së (status i ndryshëm nga PARAQITUR_PRANË BE-së). "Creation national id" mbahet nga aplikimi për çdo raport të dhënash dhe nuk është domosdoshmërisht identik me identitetin kombëtar aktual të atij shërbimi/institucioni. Kjo kërkohet nga BE për të monitoruar ndryshimet në identitetin kombëtar në vite. Pasi një raport i paraqitet BE-së, kjo fushë nuk mund të ndryshohet.

- Emri përfaqëson emrin e shërbimit/institucionit.
- Rruga përfaqëson emrin e rrugës të shërbimit/institucionit.
- Numri është numri i godinës së shërbimit/institucionit.
- Qyteti përfaqëson një qytet nga lista e të gjitha qyteteve shqiptare.
- Kodi postar është kodi postar i shërbimit/institucionit.
- Pozicioni gjeografik është një fushë e kërkuar që përfaqëson koordinatat gjeografike të shërbimit/institucionit dhe si i tillë, përdoret nga aplikime të ndryshme imazhesh vizuale (për shembull imazhet vizuale të bazuara në hartë dhe të disponueshme në http://prtr.ec.europa.eu/).

  Si alternativë, koordinatat e secilit shërbim/institucion caktohen në "41,316667;19,816667" që është pozicioni gjeografik i Tiranës (sipas http://en.wikipedia.org/wiki/Tirana) sipas sistemit koordinues "EPSG:4326" që është caktuar aktualisht si standard brenda aplikimit. Koordinatat e vendndodhjes së shërbimit/institucionit duhet të shprehen në koordinata të gjatësisë dhe gjerësisë gjeografike që japin një saktësi të procedurës me të paktën ± 500 metra dhe duke iu referuar qendrës gjeografike të vendndodhjes së shërbimit/institucionit. Gjatësia gjeografike (numri përpara shenjës ';') duhet të jetë në intervalin [-180; 180]. Gjerësia gjeografike (numri pas shenjës ';') duhet të jetë në intervalin [-90; 90].
- Shoqëria përfaqëson emrin e shoqërisë mëmë, dmth shoqëria që zotëron ose kontrollon shërbimin/institucionin dhe bëhet si përzgjedhje e shoqërive të përcaktuara brenda sistemit.

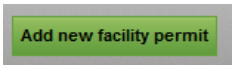
FACILITY PERMITS (LEJET E SHËRBIMEVE) është një tabelë që përfaqëson të gjitha lejet e shërbimit me fushat e mëposhtme për leje:

- Numri i lejes përfaqëson numrin e lejes

- Tipi i lejes përfaqëson tipin e lejes
- Data e aplikimit është data kur paraqitet aplikimi për leje.
- Data e lëshimit është data kur është lëshuar leja.
- E vlefshme deri është data deri kur leja caktohet që të jetë e vlefshme.

Tabela e lejeve të shërbimit mund të përdoret ose:

- Për të ndryshuar lejen ekzistuese, duke klikuar butonin  në radhën e dëshiruar ose
- Duke filluar shtimin e një lejeje të re me anë të klikimit të butonit në pjesën e sipërme të faqes.



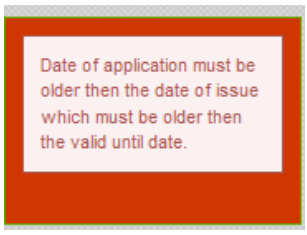
- Për më tepër, lejet mund të fshihen duke klikuar butonin  në radhën e dëshiruar.

Gjatë ndryshimit të lejes ekzistuese, detajet e lejes së përzgjedhur do të ndryshohen duke shtypur butonin“Save” ndërsa i njëjti buton ndryshon titullin e tij në “Add” (“Shtoni“), me qëllim përfundimin e krijimit të një lejeje të re.

Rregullat e mëposhtme zbatohen për secilën leje gjatë krijimit dhe ndryshimit/redaktimit:

- Të gjitha fushat janë të detyrueshme. Mosregjistrimi i një identiteti për Leje dhe klikimi i butonit Save/Add (Ruani/Shtoni) do të çojë në gabim që shfaqet afër vetë fushës dhe në kutinë e gabimeve:

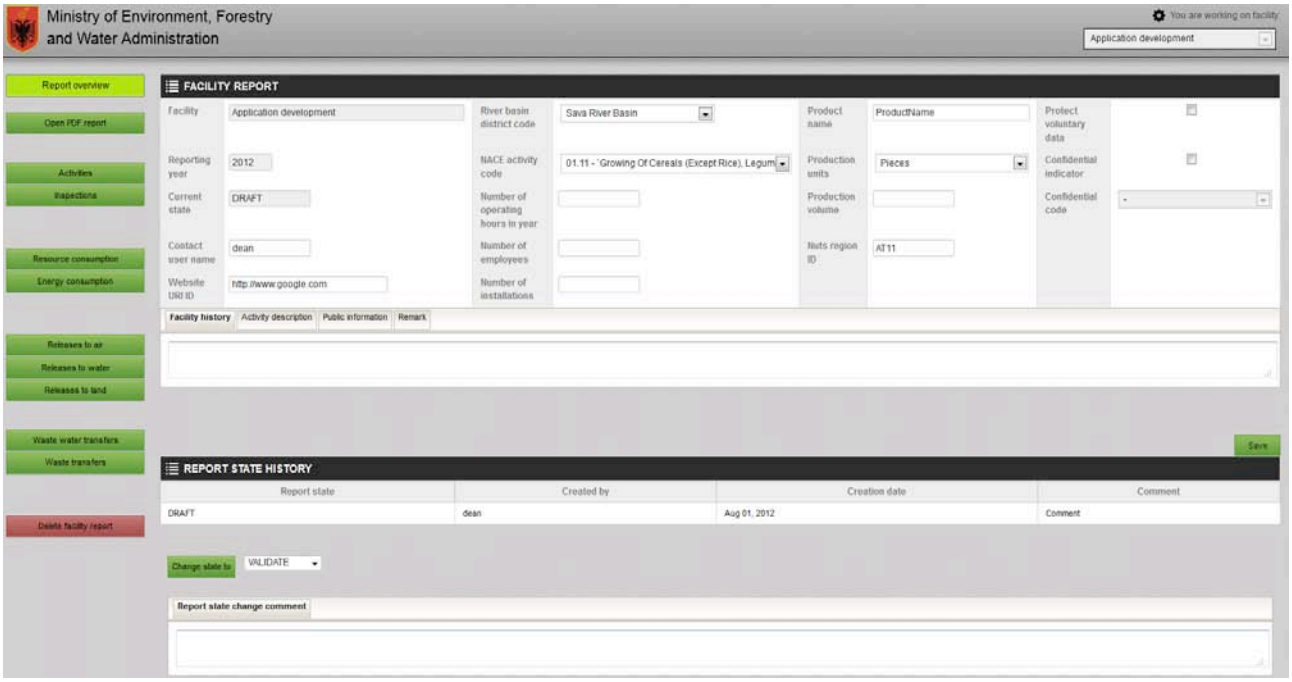
- E vlefshme deri në datën duhet të jetë më e hershme sesa data e lëshimit dhe data e lëshimit duhet të jetë më e hershme sesa data e aplikimit. Nëse jo, gabimi i mëposhtëm do të shfaqet në kutinë e gabimeve pas klikimit të butonit Save/Add:



6.6 RAPORTIT I TË DHËNAVE/SHËRBIMEVE

Menaxhimi i raportit të të dhënave/shërbimeve është moduli qendror i aplikimit të Modulit Hyrës të RTSHN-së (MHP). Në të gjitha këto faqe, përdoruesi i të dhënave/shërbimeve është i aftë të plotësojë detajet e shkarkimeve të ndotësve dhe transferimet për vitin e raportimit të raportit. Për më tepër, menaxhimi i statusit të raportit të të dhënave/shërbimeve zbatohet në këtë modul dhe mund të përdoret nga përdoruesit e të dhënave/shërbimeve dhe të ministrisë.

Menaxhimi i raportit të të dhënave/shërbimeve është i mundur nëpërmjet përdorimit të 10 faqeve, të gjitha të bazuara në të njëjtin model të përshkruar më poshtë:



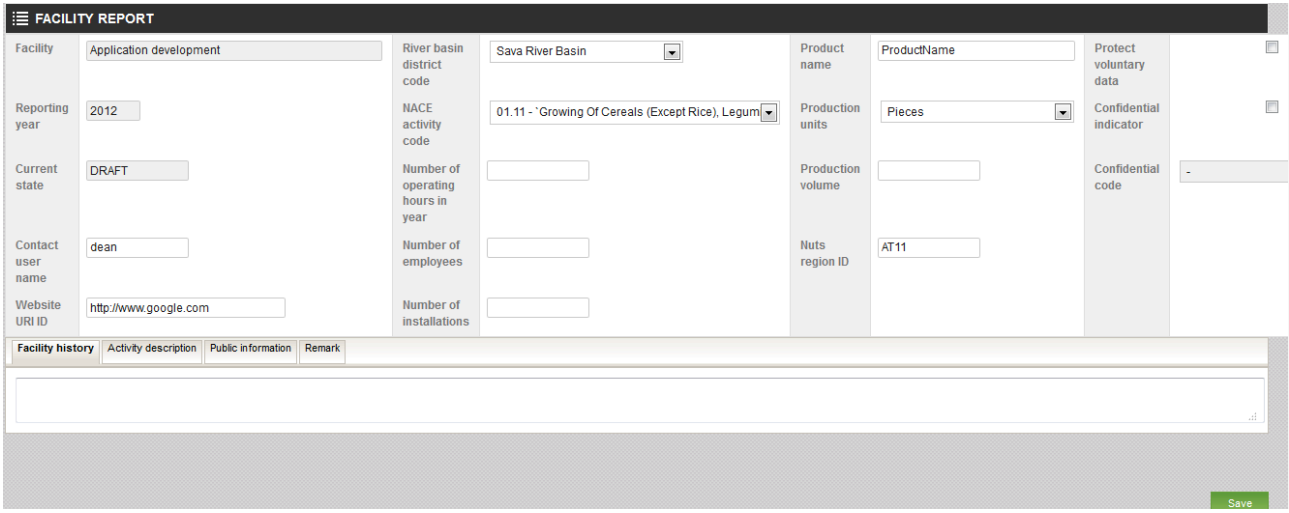
Ndërsa ana e djathtë (përmbajtja) e faqes do të ndryshojë në varësi të detajit të përzgjedhur, 12 butonat në menynë në anën e majtë janë të disponueshme në çdo kohë. Faqet dhe funksionimi i këtyre butonave diskutohen në paragrafët e mëposhtëm. Butonat që çojnë në një faqe të ndryshme ndryshojnë ngjyrat e tyre ndërsa faqja e përzgjedhur hapet, me qëllim që të ndihmojë përdoruesin të ndërgjegjësohet se cila faqe përzgjidhet në një kohë të caktuar.

6.6.1 PËRMBLEDHJA E RAPORTIT

Përmbledhja e raportit përbëhet nga dy pjesë:

- Informacion i përgjithshëm mbi raportin
- Menaxhimi i statusit të raportit

6.6.2 INFORMACION I PËRGJITHSHËM MBI RAPORTIN



Fillimisht, informacioni i përgjithshëm mbi raportin, pjesa

i jep mundësinë përdoruesit të modifikojë/shohë fushat e raportit bazë të të dhënave/shërbimeve. Dy fushat e para janë ato që krijohen menjëherë pas krijimit të raportit të të dhënave/shërbimeve dhe nuk mund të ndryshohen:

- Shërbimi/institucioni përfaqëson emrin e shërbimit/institucionit në opsionin read-only (vetëm i lexueshëm) të cilit i përket ky raport
- Viti i raportimit është përfaqësimi read-only i vitit në të cilin është përgatitur ky raport

Fushat e mbetura janë:

- Statusi aktual është përfaqësimi read-only i statusit aktual të raportit.
- Emri i kontaktit është një fushë me input të lirë që përfaqëson emrin e personit të kontaktit për këtë raport. Ai mund të jetë i paplotësuar.
- Faqja e Internetit URI ID që përfaqëson URL e faqes së internetit të shërbimit/institucionit, mund të lihet e paplotësuar. Megjithatë, nëse përfshihet, duhet të fillojë me http:// .
- Kodi i dallueshëm i ujëmbledhësit të lumit identifikon rajonin e ujëmbledhësit të lumit sipas Nenit 3(1) të Direktivës 2000/60/KE ("Direktiva Kuadër e Ujit")
- Kodi i aktivitetit NACE identifikon kodin NACE sipas rishikimit NACE 2 dhe në këtë mënyrë, aktivitetin kryesor ekonomik.
- Numri i orëve funksionale në vit është numri i orëve funksionale në vitin e raportimit.
- Numri i punonjësve është numri i punonjësve të shërbimit/institucionit.
- Numri i instalimeve është numri total i instalimeve të Panelit Ndërqeveritar për Ndryshimin e Klimës (PNNK), të mbuluara nga shërbimi/institucioni
- Emri i produktit. Produkti/grupi i produkteve.
- Përzgjedhja e njësive të prodhimit të një prej kodeve ligjore të njësive të prodhimit, siç përcaktohen në http://www.eionet.europa.eu/schemas/eprtr/listOfValues
- Volumi i prodhimit. Volumi total. Njësitë duhet të jepen në karakteristika të dhëna në vlerën e fushës së “njësive të prodhimit”.
- Identiteti i rajonit Nuts identifikon rajonin të cilit i përket shërbimi/institucioni i përkufizuar nga NUTS (http://ec.europa.eu/eurostat/ramon/nuts/codelist_en.cfm?list=nuts)

- Protect voluntary data (Mbrojtja e të dhënave vullnetare) tregon nëse të dhënat vullnetare duhet të mbrohen apo jo. Në këtë rast, të gjitha të dhënat vullnetare të shërbimit/institucionit konsiderohen të mbrojtura, me disa përjashtime të përcaktuara në përshkrimet e elementëve individualë.
- Treguesi konfidencial tregon nëse konfidencialiteti për të dhënat e detyrueshme kërkohet apo jo.
- Kodi konfidencial identifikon arsyen për konfidencialitet sipas Direktivës 2003/4/KE, Neni 4(2).
- Historia e shërbimit/institucionit përmban informacion shtesë mbi shërbimin/institucionin. Ky informacion nuk jepet në XML përfundimtare të paraqitur BE-së.
-
- Përshkrimi i aktivitetit përmban informacione shtesë mbi aktivitetin e këtij shërbimi/institucioni. Ky informacion nuk jepet në XML përfundimtare të paraqitur BE-së.
- Informacioni publik është informacion tekstual shtesë që duhet të publikohet në faqen e internetit të RETSHN-së siç është në gjendjen aktuale (për shembull e-mail, personi i kontaktit etj).
- Vërejtja është vërejtja tekstuale shtesë, për shembull informacioni në ndryshimet e historisë së shërbimit/institucioni, shpjegimi mbi arsyen për konfidencialitet etj.

Për informacione dhe shpjegime më të hollësishme në lidhje me shumicën e fushave të mësipërme, ju lutem referojuni http://www.eionet.europa.eu/schemas/eprtr/EPRTRUserManual.pdf.

Duke përdorur butonin “Save”, përdoruesi do të ruajë ndryshimet në fushat e përshkruara më sipër pa vlerësim dhe kontrolle të mëtejshme. Vetëm kur përdoruesi dëshiron të ndryshojë statusin e raportit të të dhënave (siç përshkruhet më poshtë), sistemi vlerëson të dhënat e raportit të plotë të të dhënave dhe mund t'i tregojë gabimet përdoruesit.

E rëndësishme: ndryshimet e bëra në këtë faqe do të humbin nëse përdoruesi klikon për të naviguar në një faqe të ndryshme, pa shtypur fillimisht butonin “Save”.

6.6.3 MENAXHIMI I STATUSIT TË RAPORTIT

Pjesa e poshtme e faqes përmbledhëse të raportit përfaqëson të ashtuquajturin menaxhim të statusit të raportit të të dhënave:

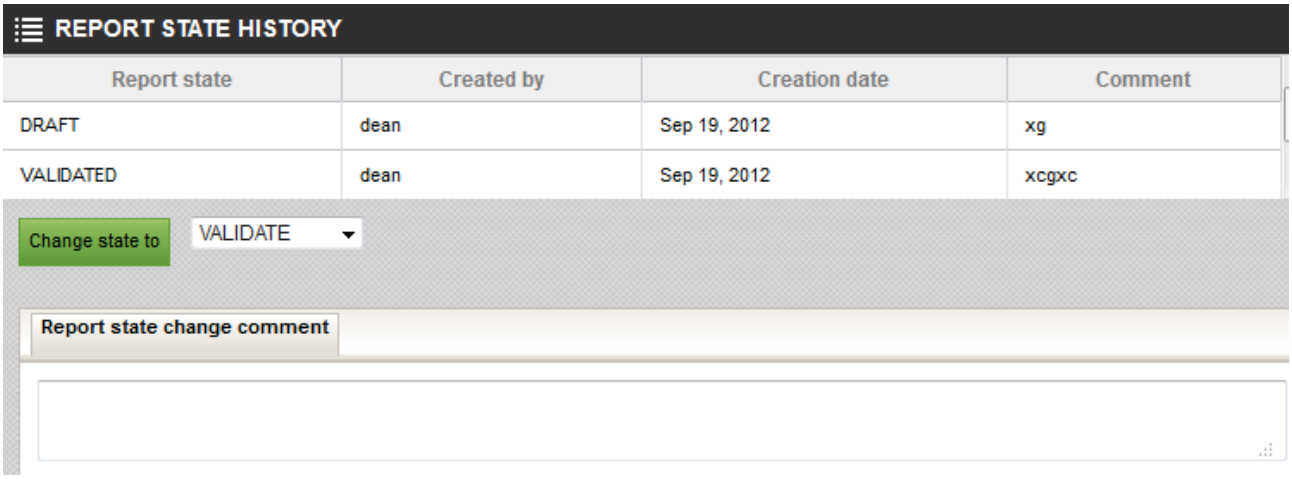


Tabela e parë ka përshkruar historinë e të gjitha statuseve të këtij raporti që ka patur në të shkuarën, duke përfshirë atë aktual në rreshtin e parë.

Nën tabelë jepet funksionimi për të ndryshuar statusin aktual të raportit të të dhënave. Duke shtypur butonin “Change state to” (“Ndryshoni statusin në“), statusi i përzgjedhur, në kutinë në pjesën e

poshtme afër tij, do t'i jepet raportit. Për më tepër, “Report state change comment” (“Koment mbi ndryshimin e statusit të raportit“) nuk mund të jetë i paplotësuar gjatë veprimit të ndryshimit të statusit.

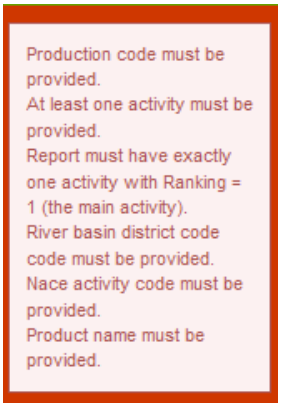
Zgjedhja e statuseve të mundshme në kutinë në pjesën e poshtme përcaktohet në mënyrë aktive, në varësi të roleve që përdoruesi aktual ka dhe statusit aktual të raportit. Diagrama në [Facility report state] [Statusi i raportit të të dhënave] i përshkruan këto mundësi.

Një kalim i një statusi të caktuar është i rëndësishëm për të kuptuar “VALIDATE” (“VLERËSONI“). Kur kërkohet ky veprim, sistemi do të kontrollojë fillimisht kërkesat e nevojshme (kryesisht të vendosura nga BE), me qëllim që të garantojë se përmbajtja e raportit është e vlefshme për trajtim të mëtejshëm. Pasi raporti të ketë arritur statusin“VALIDATED” (“I VLERËSUAR“), përmbajtja e tij nuk mund të ndryshohet më nga askush. Vetëm kur raporti shndërrohet sërish në DRAFT (duke hedhur poshtë raportin), ai mund të bëhet sërish i shkrueshëm.

Sa më poshtë janë shembuj të vlerësimeve të aplikuara kur është kërkuar ndryshimi në VALIDATE:

- Raporti i të dhënave duhet të ketë të paktën një aktivitet (shihni paragrafin e mëposhtëm) me numër klasifikues 1.
- Nëse jepet, faqja e internetit URI duhet të fillojë me http://
- Kodi i dallueshëm i ujëmbledhësit të lumit është i detyrueshëm
- Emri i produktit është i detyrueshëm
- Kodi i prodhimit është i detyrueshëm
- Kodi i aktivitetit NACE është i detyrueshëm

Pamundësia për të siguruar sa më sipër përpara paraqitjes së ndryshimit të statusit VALIDATE, do të çojë në gabime që shfaqen në kutinë e gabimeve në anën e poshtme të majtë të faqes:



6.6.4 OPEN PDF REPORT (HAPNI RAPORTIN NË PDF)

Me shtypjen e butonit “Open PDF Report” do të hapet një dokument në formatin PDF me informacione të hollësishme të raportit të të dhënave aktualisht të hapur. Për detaje në lidhje me këtë raport dhe të tjera, ju lutem referojuni [Reports][Raportet].

6.6.5 AKTIVITETET

Elementët e aktiviteteve janë pjesë përbërëse e XML të eksportuar dhe kanë përkufizimin e aktiviteteve të një shërbimi/institucioni. Numri i klasifikimit është një fushë e detyrueshme dhe duhet të jetë unik. Mbi të gjitha, pasja e të paktën një aktiviteti me numër klasifikues "1" është një kërkesë e vendosur nga RETSHN.

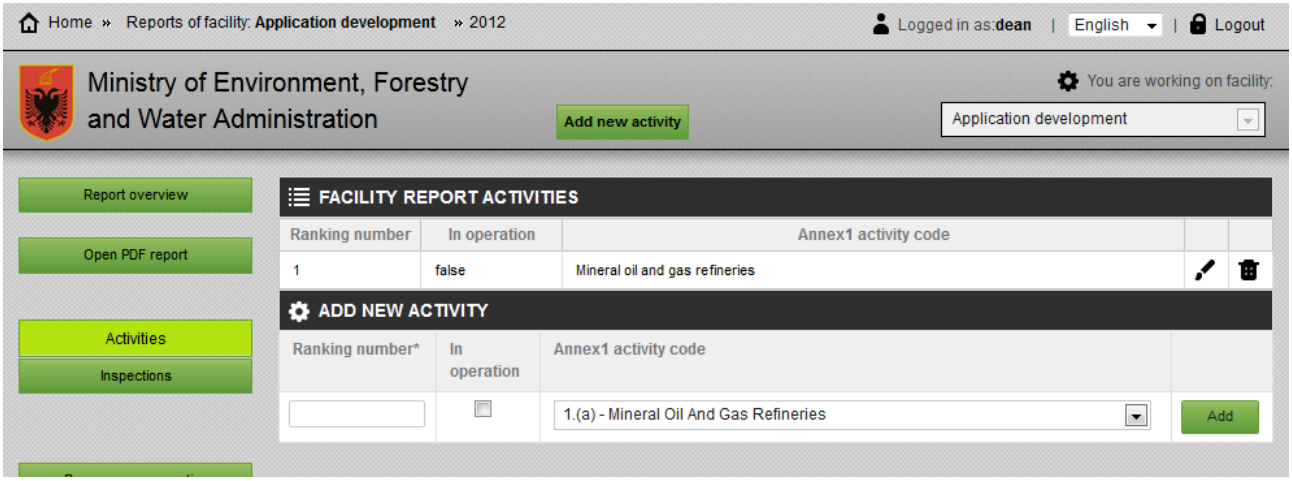
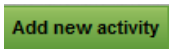
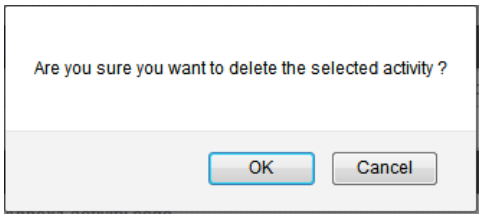


Tabela e aktiviteteve mund të përdoret ose:

- Për të ndryshuar/redaktuar aktivitetin ekzistues, duke klikuar linkun  në radhën e dëshiruar, ose
- Për të filluar shtimin e një aktiviteti të ri duke klikuar butonin  në pjesën e sipërme të faqes.
- Për më tepër, aktivitetet mund të fshihen duke klikuar butonin  në radhën e dëshiruar. Dialogu i mëposhtëm duhet të konfirmohet në këtë rast:



6.6.6 INSPEKTIMET

Inspektimet përbëjnë informacion rreth inspektimeve të kryera në shërbim/institucion gjatë vitit të raportimit.

Inspektimet nuk janë pjesë e XML-së së eksportuar.

Fushat e mëposhtme janë të detyrueshme për çdo inspektim:

- Data e inspektimit
- Inspektori që përfaqëson emrin e inspektorit
- Afati i zbatimit
- Ndryshimet e kërkuara

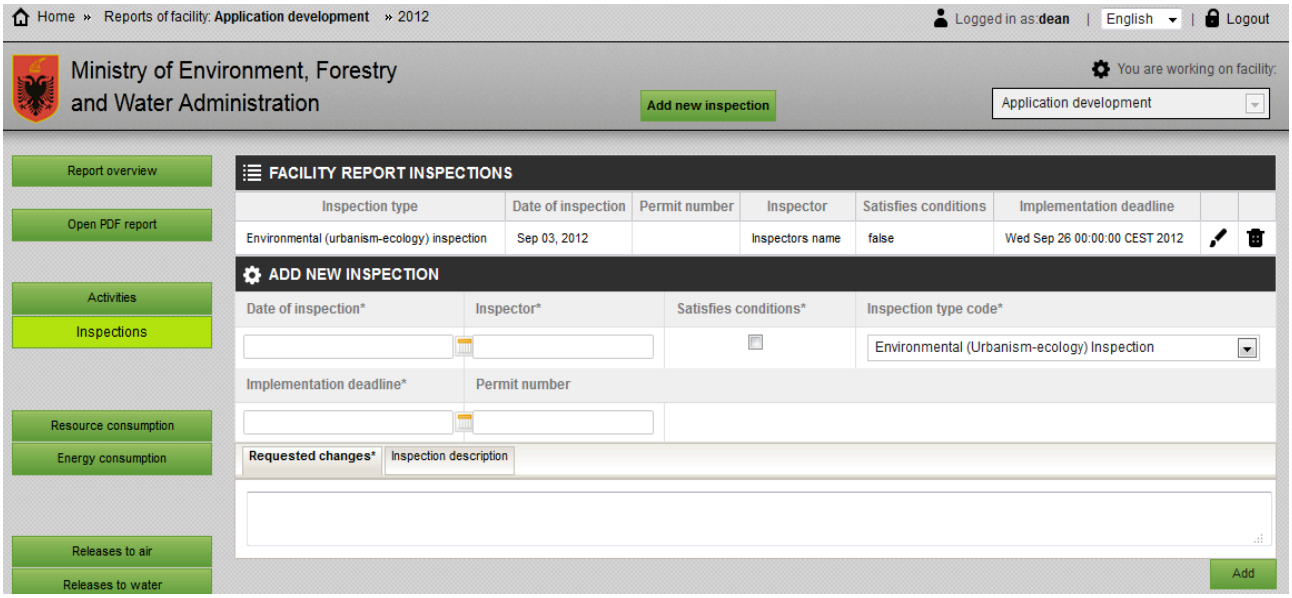
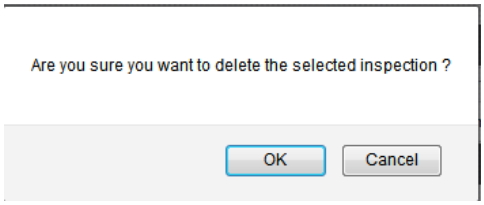


Tabela e inspektimeve mund të përdoret ose:

- Për të ndryshuar inspektimin ekzistues, duke klikuar linkun në radhën e dëshiruar, ose
- Për të filluar shtimin e një inspektimi të ri, duke klikuar butonin në p[illegible]n e sipërme të faqes.
- Për më tepër, inspektimet mund të fshihen duke klikuar butonin në radhën e dëshiruar. Dialogu i mëposhtëm duhet të konfirmohet në këtë rast:

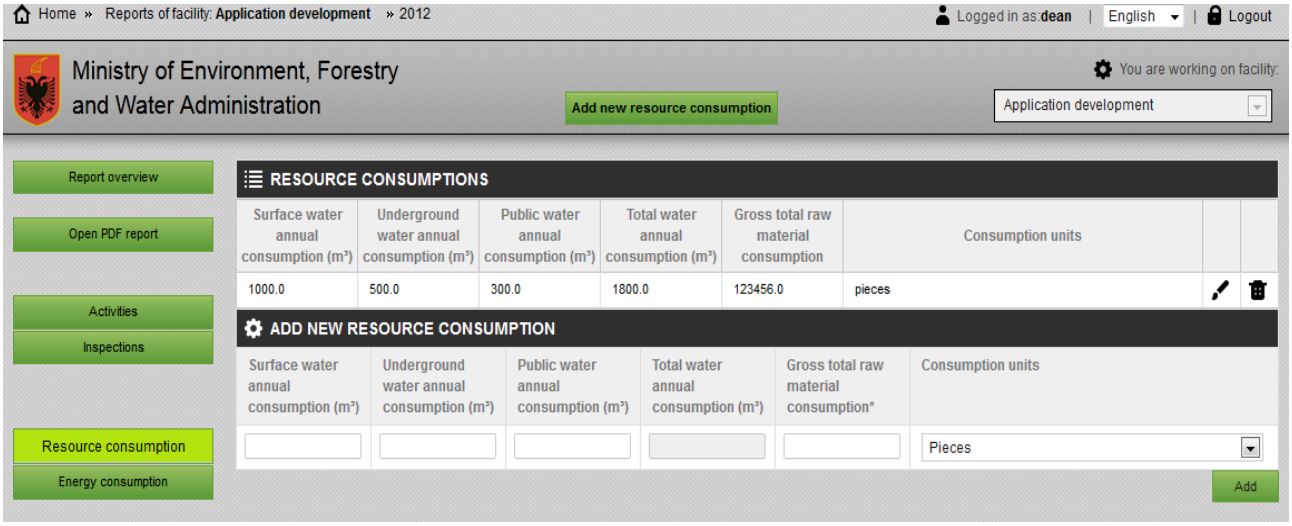


6.6.7 KONSUMET E BURIMEVE

Konsumet e burimeve janë informacion rreth burimeve të konsumuara në shërbim/institucion gjatë vitit të raportimit.

Konsumet e burimeve nuk janë pjesë e XML-së së eksportuar.

"Gross total raw material consumption" ("Konsumi total bruto i lëndës së parë") është fusha e vetme e detyrueshme që duhet të shprehet në njësinë e përzgjedhur në fushën "Consumption units" ("Njësitë e konsumit"). Fusha të tjera opsionale shprehen në m^3.



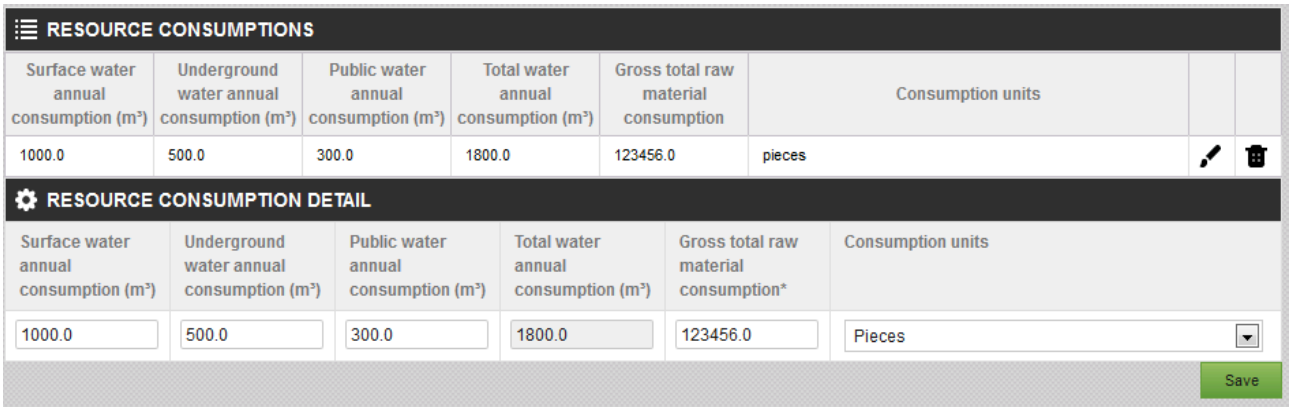
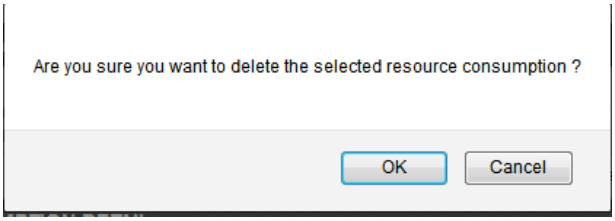


Tabela e konsumeve të burimeve mund të përdoret ose:

- Për të ndryshuar konsumin e burimit ekzistues, duke klikuar linkun  në radhën e dëshiruar, ose
- Për të filluar shtimin e një konsumi të ri burimi, duke klikuar butonin  në pjesën e sipërme të faqes.
- Për më tepër, konsumet e burimeve mund të fshihen duke klikuar butonin  në radhën e dëshiruar. Dialogu i mëposhtëm duhet të konfirmohet në këtë rast:



6.6.8 KONSUMET E ENERGJISË

Konsumet e energjisë janë informacion rreth burimeve të konsumuara të energjisë në shërbim/institucion gjatë vitit të raportimit.

Konsumet e energjisë nuk janë pjesë e XML-së së eksportuar.

"Total consumption" ("Konsumi total") i shprehur në njësinë e përzgjedhur në "Consumption units" ("Njësitë e konsumit") është një fushë e detyrueshme.

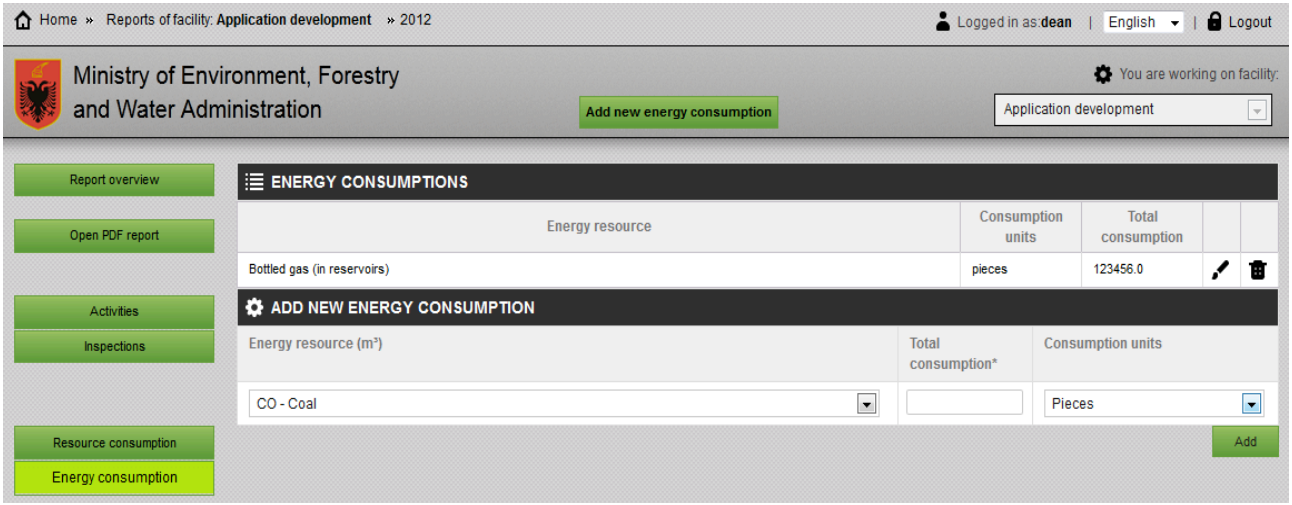
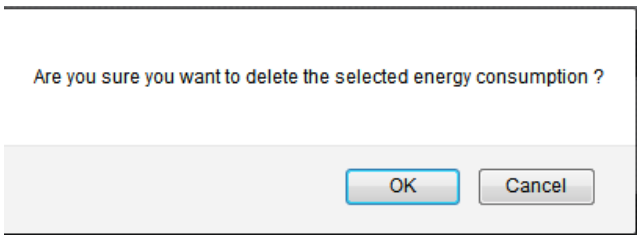


Tabela e konsumeve të energjisë mund të përdoret ose:

- Për të ndryshuar konsumin ekzistues të energjisë, duke klikuar linkun në radhën e dëshiruar ose
- Për të filluar shtimin e një konsumi të ri energjie, duke klikuar butonin në pjesën e sipërme të faqes.
- Për më tepër, konsumet e energjisë mund të fshihen duke klikuar butonin në radhën e dëshiruar. Dialogu i mëposhtëm duhet të konfirmohet në këtë rast: Add new energy consumption



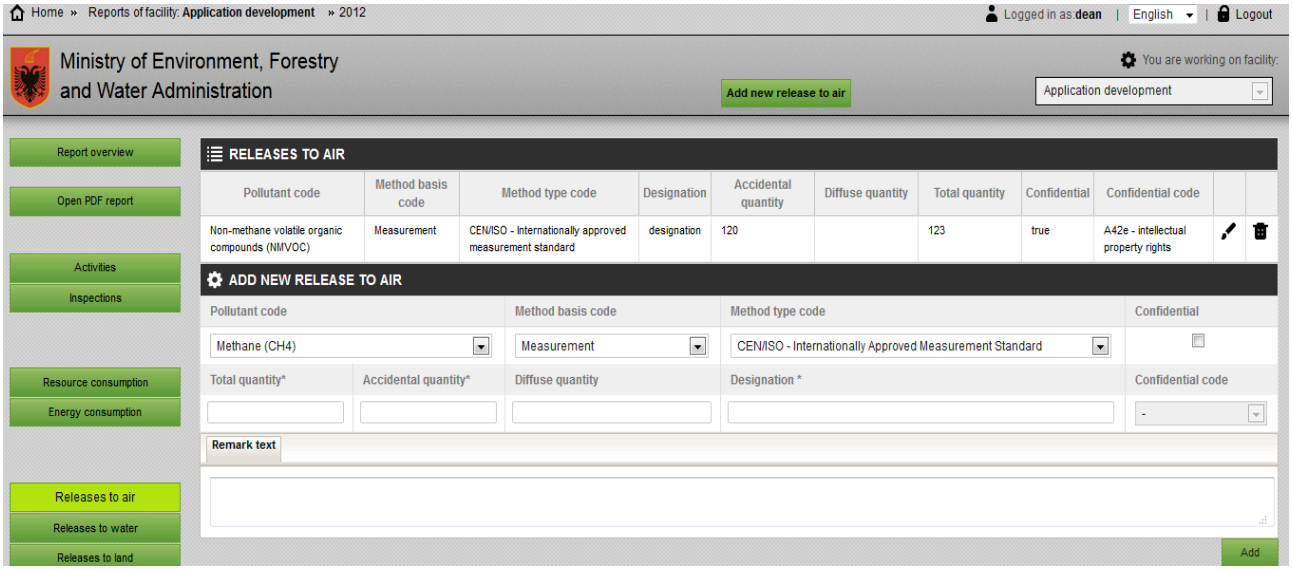
6.6.9 SHKARKIMET NË AJËR

Shkarkimet në ajër klasifikohen si elementë mesatarë të *Shkarkimit të Ndotësve në ajër* të XML-së të paraqitur RETSHN-së.

"Total quantity" ("Sasia totale") është një fushë e detyrueshme dhe duhet të jetë më e madhe ose e

barabartë me shumën e "Accidental quantity" ("Sasia aksidentale") dhe "Diffuse quantity" ("Sasia e pacaktuar") që janë gjithashtu fusha të detyrueshme. Në varësi të kodit të tipit të metodës që është përzgjedhur, fusha e përcaktimit do të jetë ose nuk do të jetë e detyrueshme:

- Matja "CEN/ISO – Standardi i matjes së aprovuar ndërkombëtarisht" ka një përcaktim të detyrueshëm.
- Llogaritja e Skemës së Tregtimit të Emetuesve "STE" – Udhëzimet për monitorimin dhe raportimin e emetimeve të gazeve të serave sipas Skemës së Tregtimit të Emetimeve" ka një përcaktim të detyrueshëm.
- Llogaritja "PNNK – Udhëzimet e PNNK-së" ka një përcaktim të detyrueshëm.
- Llogaritja "UNECE/EMEP" ka një përcaktim të detyrueshëm.



Tre tipe të sasive (totale, aksidentale dhe të papërcaktuara) duhet të shprehen në formatin në kg/vit dhe me tre shifra domethënëse ("3 numra domethënës"). Shembujt e mëposhtëm janë sasi të vlefshme: "0.00", "123", "1230", "12300", "123." , "12.3", "12.0", "10.0", "1.23", "1.20", "1.00", "0.123", "0.120", "0.100", "0.0123", "0.0120", "0.0100", "0.0123", "1.55", "7070", "123", "1000" etj.

Shembuj të sasive të vlefshme janë: "", "a", "1234","1234.", "12", "12340", "1", "1.0", "1.001", "1.1", "0", "0.", "0.0" etj.

Për më tepër janë zbatuar rregullat e mëposhtme:

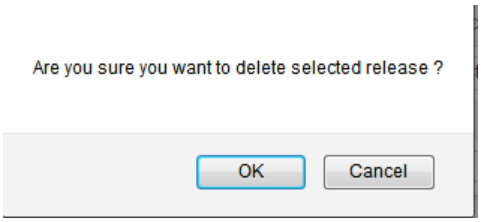
- Sasia totale është tregues i sasisë totale të ndotësve të shkarkuar në ajër nga të gjitha burimet e aktivitetit (duke përfshirë shkarkimet aksidentale dhe shkarkimet nga burime të papërcaktuara)
- Sasia aksidentale është tregues i sasisë së ndotësve të shkarkuar aksidentalisht në ajër
- Sasia e papërcaktuar është tregues i sasisë së ndotësve të shkarkuar në ajër nga burime të papërcaktuara

- Një tip i kodit të ndotësve mund të regjistrohet vetëm për ato shkarkime në ajër brenda secilit raport të të dhënave. Përpjekja për të krijuar një shkarkim me kodin e ndotësit që tashmë është përkufizuar brenda kësaj kategorie (ajri) të shkarkimit do të çojë në gabim:

- Nëse kërkohet konfidencialitet:
  - Duhet të jepet kodi konfidencial
  - Grupi i ndotësve në vend të kodit të ndotësve do të eksportohet në RETSHN XML. Lista e kodeve të ndotësve dhe grupet korresponduese mund të gjenden nëpërmjet faqes së internetit
    - http://www.eionet.europa.eu/schemas/eprtr/listOfValues
- Teksti i vërejtjeve që është opsional nuk do të publikohet nga RETSHN.

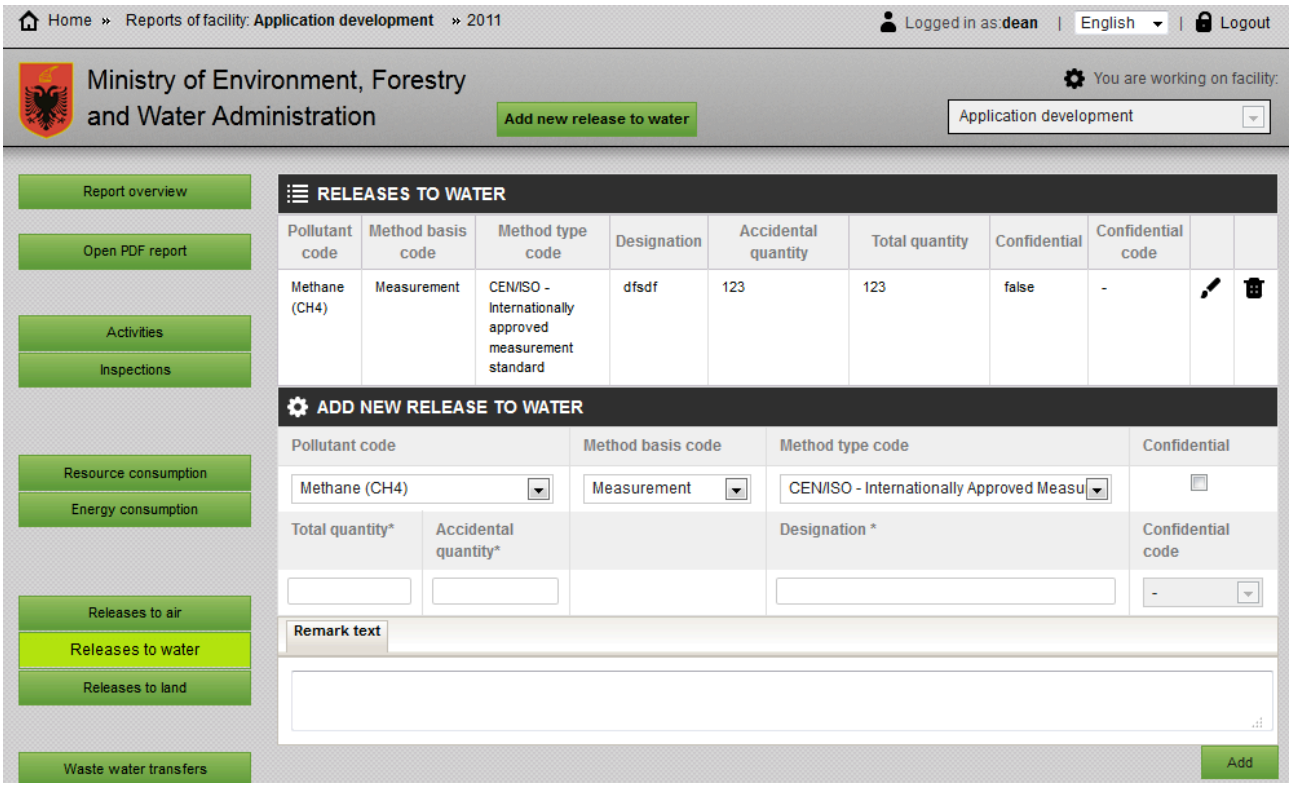
Shkarkimet në tabelën e ajrit mund të përdoren ose:

- për të ndryshuar shkarkimin ekzistues në ajër, duke klikuar linkun  në radhën e dëshiruar ose
- për të filluar shtimin e një shkarkimi të ri në ajër, duke klikuar butonin  në pjesën e sipërme të faqes.
- për më tepër, shkarkimi në ajër mund të fshihet duke klikuar butonin  në radhën e dëshiruar. Dialogu i mëposhtëm duhet të konfirmohet në këtë rast:



6.6.10 SHKARKIMET NË UJË

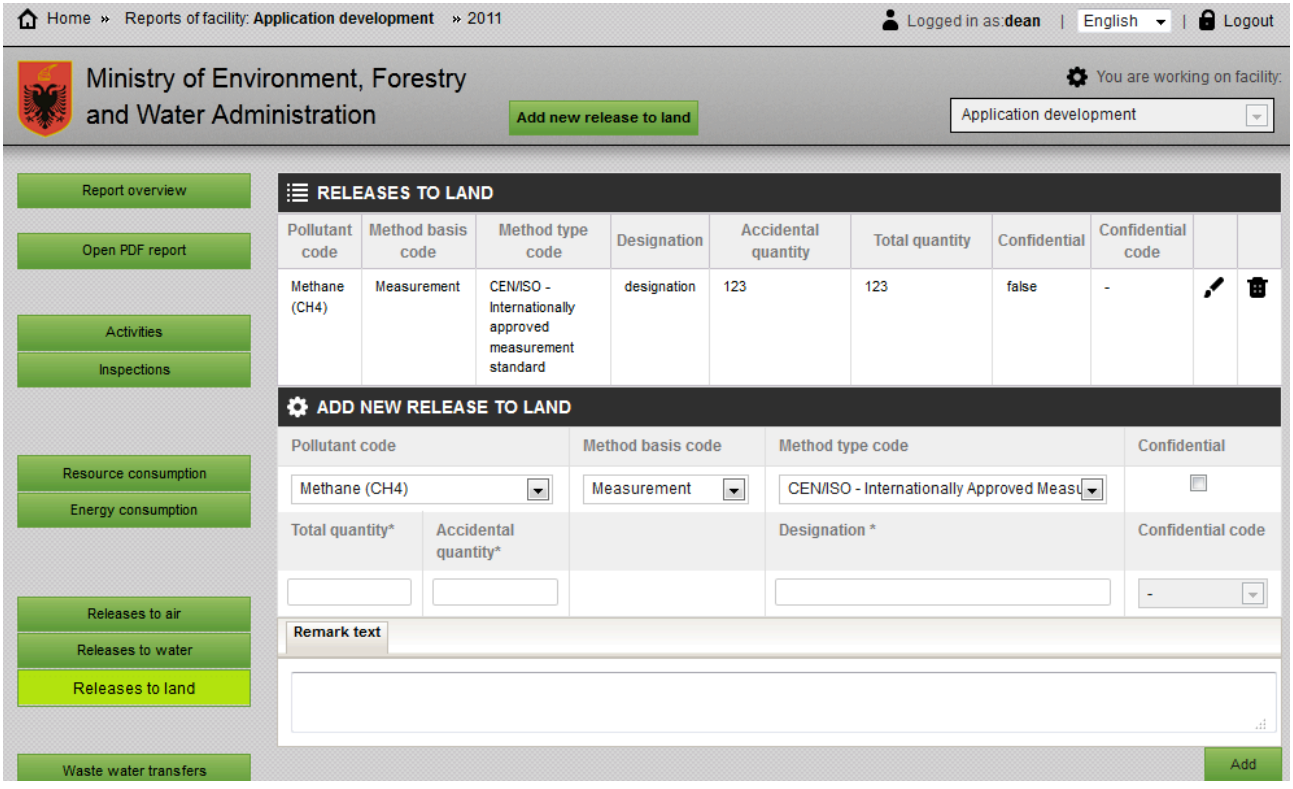
Shkarkimet në ujë klasifikohen si elementë mesatare të *Shkarkimit të Ndotësve në ujë* të XML-së të paraqitur pranë RETSHN-së.



Shkarkimet në faqen e ujit trajtohen njëlloj si shkarkimet në ajër (shihni [Shkarkimet në ajër]) me ndryshimin e vetëm se mundësia për të regjistruar “sasinë e papërcaktuar ” nuk është e pranishme brenda shkarkimeve në ujë.

6.6.11 SHKARKIMET NË TOKË

Shkarkimet në tokë klasifikohen si elementë mesatarë të *Shkarkimit të Ndotësve në tokë* të XML-së të paraqitur RETSHN-së.

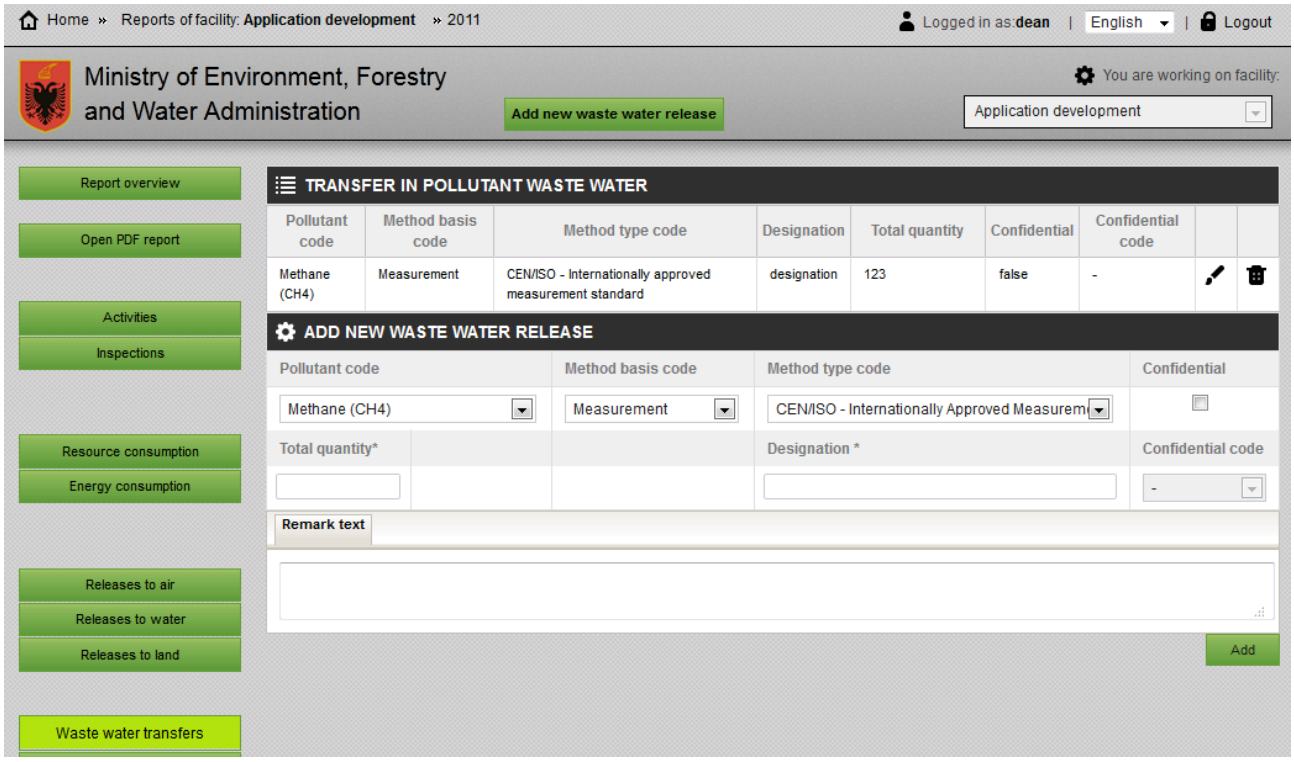


Shkarkimet në faqen e tokës trajtohen njëlloj si shkarkimet në ajër (shihni [Shkarkimet në ajër]) me ndryshimin e vetëm se mundësia për të regjistruar “sasinë e papërcaktuar ” nuk është e pranishme brenda shkarkimeve në tokë.

6.6.12 TRANSFERIMET E UJËRAVE TË ZEZA

Transferimet e ujërave të zeza konvertohen si *tipi i transferimit të ndotësve* të RETSHN XML të eksportuar.

Transferimi i ujërave të zeza i ndotësve nënkupton zhvendosjen përtej kufijve të një shërbimi të ndotësve në ujërat e zeza të destinuara për trajtimin e ujërave të zeza, duke përfshirë trajtimin e ujërave të zeza industriale. Transferimi i ujërave të zeza mund të kryhet nëpërmjet një kanali të ujërave të zeza ose ndonjë mjeti tjetër, si për shembull kontenierë ose kamionë-cisternë (rruge).



Faqja e transferimit të ujërave të zeza trajtohet njëlloj si shkarkimet në ajër (shihni [Shkarkimet në ajër]), me ndryshimin e vetëm që mundësia për të regjistruar “sasinë e papërcaktuar ” dhe/ose “sasia aksidentale” nuk është e pranishme në transferimet e ujërave të zeza.

6.6.13 TRANSFERIMET E MBETJEVE

Transferimet e mbetjeve konvertohen si *Tip i transferimit të mbetjeve* të RETSHN XML të eksportuar.

Transferimet e mbetjeve përfaqësojnë zhvendosjen përtej kufijve të një shërbimi të mbetjeve të destinuara për asgjësim ose rigjenerim.

Operatorët duhet të raportojnë transferimet e mbetjeve të:

- Mbetjeve të rrezikshme (MRR)
- Mbetjeve të parrezikshme (jo-MRR)

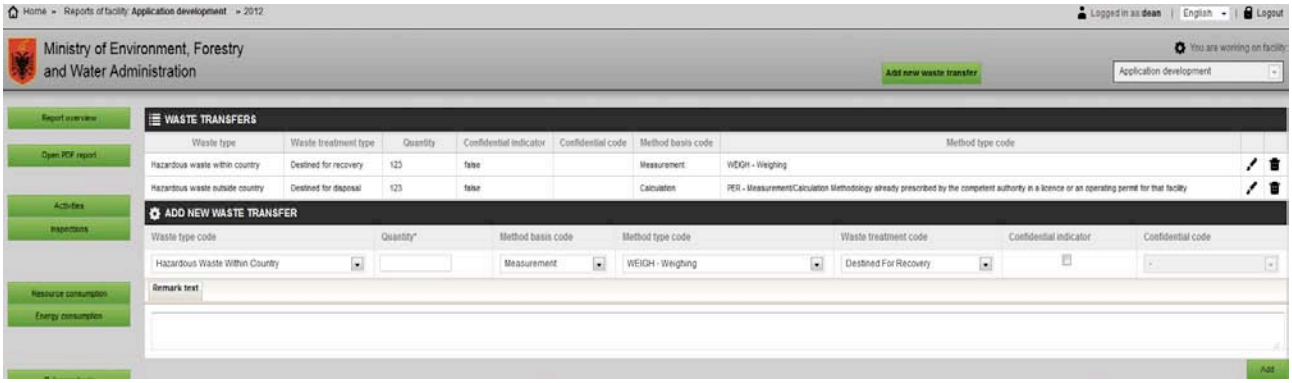
për çdo operacion ose asgjësim, me përjashtim të operacioneve të asgjësimit të trajtimit të tokës dhe injektimit të mbetjeve ndërsa ato duhet të raportohen si shkarkime në tokë.

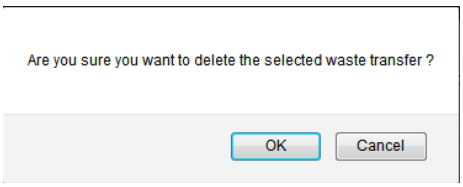
Të gjitha të dhënat duhet të shprehen në tonë/vit dhe me tre shifra domethënëse.

Tabela e transferimit të mbetjeve mund të përdoret ose:

- Për të ndryshuar transferimin e mbetjeve ekzistuese duke klikuar në linkun  në radhën e dëshiruar, ose
- Për të filluar shtimin e një transferimi të ri mbetjesh, duke klikuar butonin 

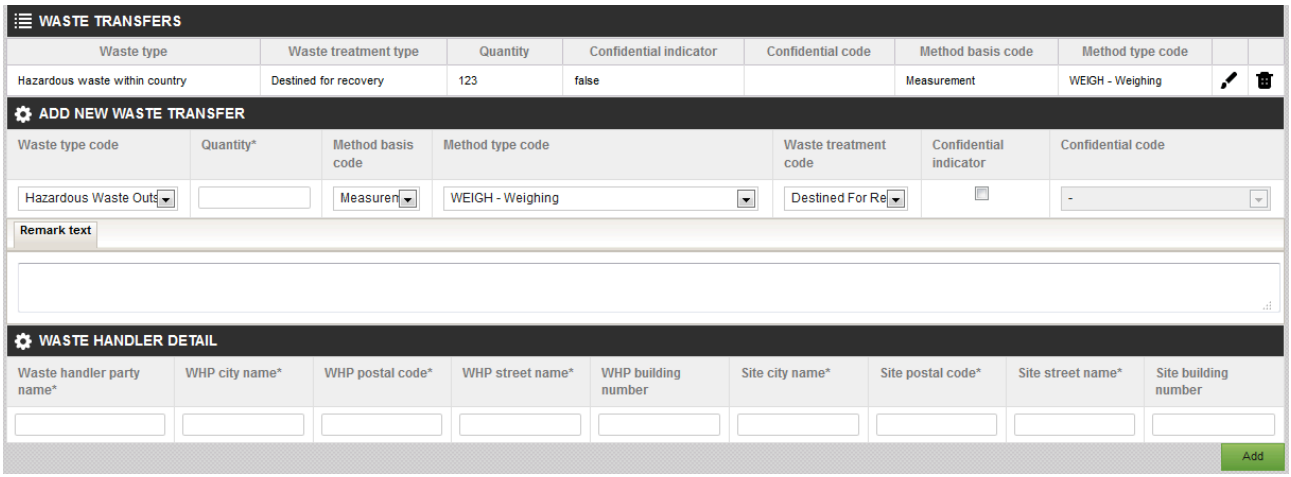
në pjesën e sipërme të faqes.
- Për më tepër, transferimet e mbetjeve mund të fshihen duke klikuar butonin  në radhën e dëshiruar. Dialogu i mëposhtëm duhet të konfirmohet në këtë rast:





Për zhvendosjet ndërkufitare të mbetjeve të rrezikshme, emri dhe adresa e rigjeneruesit ose asgjësuesit të mbetjes dhe vendndodhja aktuale e rigjenerimit ose asgjësimit duhet të raportohet.

Për këtë arsye tabela shtesë “Detaje mbi trajtuesin e mbetjes” do të shfaqet në pjesën e poshtme të faqes nëse “Vendi Jashtë Mbetjes së Rrezikshme“ përzgjidhet si kodi i tipit të mbetjes.



Informacioni mbi detajet e trajtuesit të mbetjes është i detyrueshëm vetëm në rast se transferimi i mbetjes ka “vendin jashtë mbetjes së rrezikshme“ si kod të tipit të mbetjes.

Fusha “quantity” (“sasia“) e tabelës “Waste transfers” (“Transferimet e mbetjeve“) duhet të shprehet në formatin me tre shifra domethënëse (“3 numra domethënës”). Shembuj të mëposhtëm janë sasi të vlefshme: "0.00", “123", "1230", "12300", "123." , "12.3", "12.0", "10.0", "1.23", "1.20", "1.00", "0.123", “0.120", "0.100", "0.0123", "0.0120", "0.0100", "0.0123", "1.55", "7070", "123", "1000" etj.

Shembuj të sasive të pavlefshme janë: "", "a", "1234","1234.", "12", "12340", "1", "1.0", "1.001", "1.1", "0", "0.", "0.0" etj.

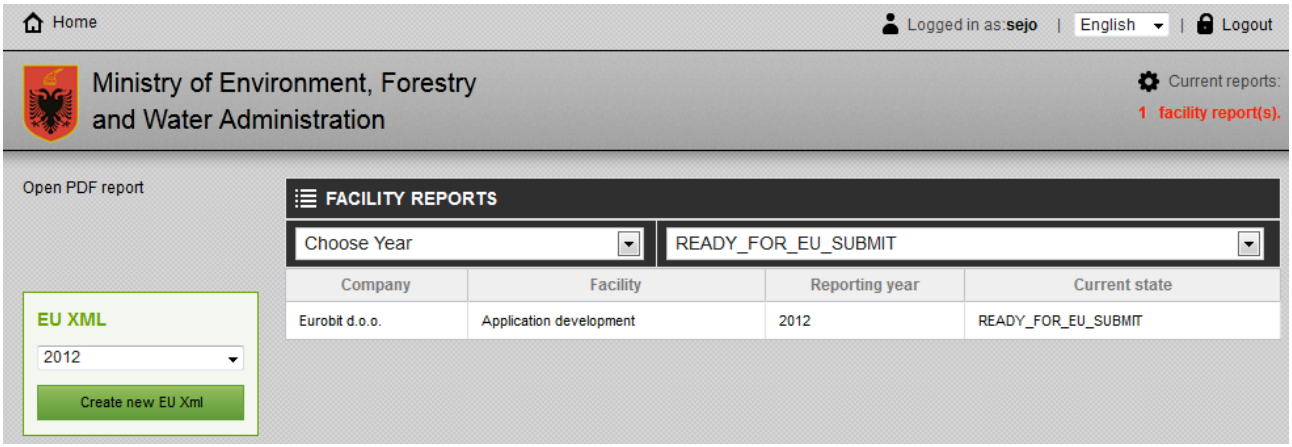
6.6.14 FSHINI RAPORTIN E TË DHËNAVE

Duke shtypur butonin “Delete facility report” (“Fshini raportin e të dhënave“) raporti i të dhënave do të fshihet përfundimisht nga sistemi dhe përdoruesi do të navigojë sërish në përmbledhjen e raporteve të të dhënave për shërbimin në të cilin ai ose ajo është duke punuar.

Vini re se butoni i fshirjes së raportit të të dhënave do t'i paraqitet përdoruesit *vetëm nëse një përdorues ka rolin e FACILITY_INPUT (INPUTIT TË SHËRBIMIT) dhe kur raporti i të dhënave ka statusin DRAFT*

6.7 PËRMBLEDHJA E RAPORTEVE TË TË DHËNAVE TË MINISTRISË

Përdoruesit me role ministeriale lejohen të kenë akses në faqen “ministry facility reports overview” (“përmbledhja e raporteve të të dhënave të ministrisë“).



Të paraqitura në tabelë në anën e djathtë ndodhen të gjitha raportet mbarëkombëtare të të dhënave, me mundësinë e filtrimit të pamjes së paraqitur sipas:

- Viti është viti i raportimit të raportit të të dhënave. Vetëm vitet që mund të gjenden brenda raporteve ekzistuese të të dhënave të sistemit janë të pranishëm në këtë filtër.
- Statusi është statusi aktual i raportit të të dhënave. Vetëm statuset aktualisht të përdorur si *status aktual* brenda raporteve ekzistuese të të dhënave të sistemit janë të pranishëm në këtë filtër. Nëse është e zbatueshme, ky filtër mund të përmbajë gjithashtu një shënim “MINISTRY_TO_DO” (“MINISTRIA VEPRUESE”) të përdorur për të kërkuar raporte të të dhënave me status aktual të barabartë me “GATI_PËR_PARAQITJE_PRANË_BE-SË” dhe “I APROVUAR”.

Sistemi do të kryejë kërkime në bazën e të dhënave dhe do të paraqesë rezultate të reja sa herë që ndryshohet ndonjë prej këtyre filtrave.

Ana e majtë e faqes “ministry facility reports overview” “përmbledhja e raporteve të të dhënave të ministrisë“) përbëhet nga raportimi dhe mundësitë e eksportimit të XML-së. Menyja “EU XML” (“BE XML”) do të jetë e dukshme vetëm për përdoruesit me rolin “MINISTRY_APPROVE” dhe vetëm nëse ekziston të paktën një raport mbi të dhënat me statusin “GATI_PËR_PARAQITJE_PRANË_BE-së”. Në këtë rast, përdoruesi mund të zgjedhë një vit për të cilin duhet të gjenerohet EU XML. Zgjedhja e viteve të mundshme bazohet në vitet e raportimit të ndodhura në raportet e të dhënave me status aktual të barabartë me “GATI_PËR_PARAQITJE_PRANË_BE-së”.

Shtypja e butonit “Create new EU XML” (“Krijoni BE XML të Re“) do të gjenerojë më pas XML që përbëhet nga raporte të dhënash me vit raportimi të barabartë me vitin e përzgjedhur dhe me statusin e barabartë me “GATI_PËR_PARAQITJE_PRANË_BE-së”.

6.8 MODULI I ADMINISTRIMIT

6.8.1 SHOQËRITË

Faqja e shoqërive i jep mundësinë administratorit të sistemit (përdorues me rolin "ADMIN") të menaxhojnë informacion në lidhje me shoqëritë që përkufizohen brenda Modulit Hyrës të RTSHN-së (MHP).

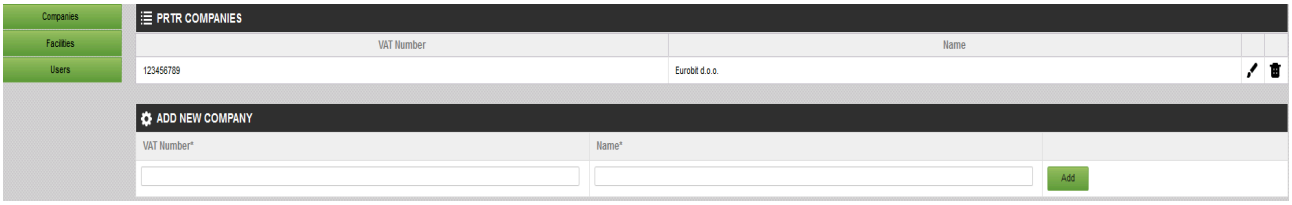


Tabela e shoqërive mund të përdoret ose:

- për të ndryshuar shoqërinë ekzistuese duke klikuar linkun  në radhën e dëshiruar, ose
- për të filluar shtimin e një shoqërie të re duke klikuar butonin "Add new company" ("Shtoni një shoqëri të re") në pjesën e sipërme të faqes.
- Për më tepër, shoqëritë mund të fshihen duke klikuar butonin  në radhën e dëshiruar. Fshirja e një shoqërie të MHP-së do të çojë në:
    - fshirjen e përhershme të asaj shoqërie
    - fshirjen e përhershme të të gjitha shërbimeve të lidhura me këtë shoqëri
    - fshirjen e përhershme të të gjitha raporteve të të dhënave të lidhura me shërbimet e mësipërme

Ndryshimi ose krijimi i një shoqërie të re ose ekzistuese janë në përputhje me rregullat e mëposhtme:

- Numri i TVSH-së është fushë e detyrueshme
- Emri është fushë e detyrueshme

6.8.2 SHËRBIMET

Faqja e shërbimeve i jep mundësinë administratorit të sistemit (përdorues me rolin "ADMIN") për të menaxhuar informacion në lidhje me shërbimet që përkufizohen brenda Modulit Hyrës të RTSHN-së (MHP).

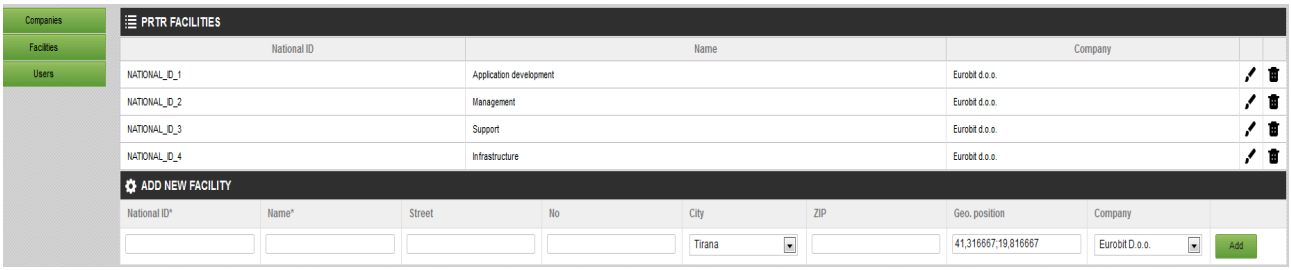
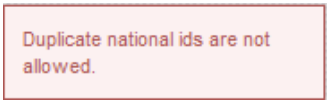


Tabela e shërbimeve mund të përdoret ose:

- Për të ndryshuar shërbimin ekzistues duke klikuar linkun  në radhën e dëshiruar, ose
- Për të filluar shtimin e një shërbimi të ri duke klikuar butonin "Add new facility" ("Shtoni një buton të ri") në pjesën e sipërme të faqes.
- Për më tepër, shërbimet mund të fshihen duke klikuar butonin  në radhën e dëshiruar. Fshirja e një shërbimi të MHP-së do të çojë në:
    - Fshirjen e përhershme të atij shërbimi
    - Fshirjen e përhershme të të gjitha raporteve të të dhënave për atë shërbim

Ndryshimi ose krijimi i një shërbimi të ri ose ekzistues është në përputhje me rregullat e mëposhtme:

- Identiteti kombëtar është fushë e detyrueshme dhe duhet të jetë unik brenda MHP-së. Përpjekja për të ruajtur Identitetin Kombëtar në një tashmë ekzistues do të shkaktojë një gabim:



- Emri është fushë e detyrueshme
- Pozicioni gjeografik është një fushë e kërkuar që përfaqëson koordinatat gjeografike të shërbimit dhe si i tillë, përdoret nga aplikime të ndryshme imazhesh vizuale (për shembull imazhet vizuale të bazuara në hartë të disponueshme në http://prtr.ec.europa.eu/).
- Si alternativë, koordinatat e secilit shërbim caktohen "41,316667;19,816667", i cili është pozicioni gjeografik i Tiranës (sipas http://en.wikipedia.org/wiki/Tirana) sipas

- sistemit koordinativ "EPSG:4326" që është caktuar aktualisht si standard brenda aplikimit. Koordinatat e vendndodhjes së shërbimit/institucionit duhet të shprehen në koordinata të gjerësisë dhe gjatësisë gjeografike, duke dhënë një saktësi të procedurës prej të paktën ± 500 metra dhe duke iu referuar qendrës gjeografike të vendit të shërbimit/institucionit. Gjatësia gjeografike (numri përpara shenjës ';') duhet të jetë në intervalin [-180; 180]. Gjerësia gjeografike (numri pas shenjës ';') duhet të jetë në intervalin [-90; 90].

- Shoqëria është një përzgjedhje e shoqërive ekzistuese të MHP-së me të cilat ka lidhje shërbimi/institucioni i caktuar.

6.8.3 PËRDORUESIT

Faqja e përdoruesve i jep mundësinë administratorit të sistemit (përdoruesit me rol "ADMIN") të menaxhojë informacion në lidhje me përdoruesit që përkufizohen brenda Modulit Hyrës të RTSHN-së (MHP).

Tabela e përdoruesve mund të përdoret ose:

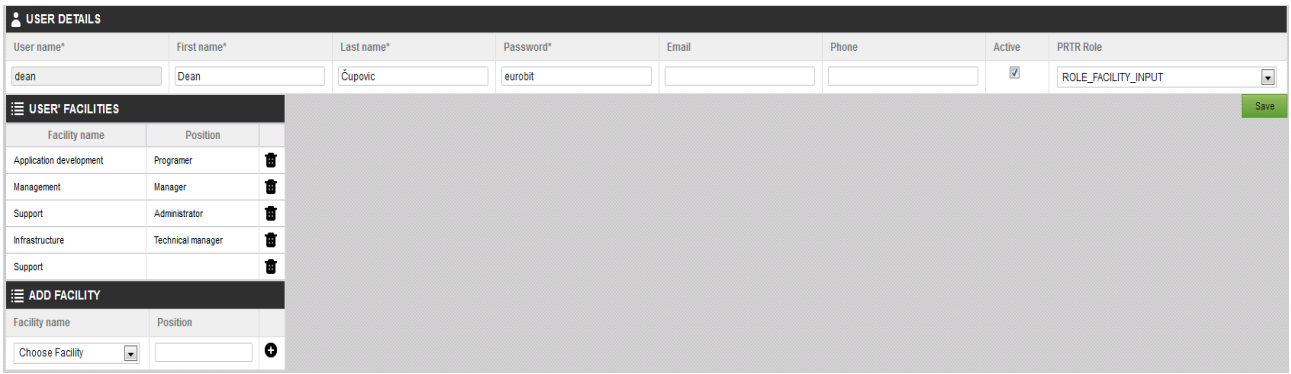
- Për të ndryshuar përdoruesin ekzistues duke klikuar linkun  në radhën e dëshiruar, ose
- Duke filluar shtimin e një përdoruesi të ri, duke klikuar butonin “Add new user” (“Shtoni përdorues të ri”) në pjesën e sipërme të faqes.
- Për më tepër, përdoruesit mund të fshihen duke klikuar butonin  në radhën e dëshiruar. Fshirja e një shërbimi të MHP-së do të çojë në:
    - Fshirjen e përhershme të atij përdoruesi

Përdoruesit që kanë krijuar ndonjë raport ekzistues të të dhënave ose kanë ndryshuar statusin e ndonjë raporti ekzistues të të dhënave nuk mund të fshihen nga

sistemi për aq kohë [illegible] këto raporte janë të pranishme në sistem. Për këta përdorues do të çaktivizohet butoni  .

Kur përzgjidhet “edit” (ndryshim/redaktim) i një përdoruesi ekzistues, një tabelë shtesë do të shfaqet në anën e poshtme të majtë. Kjo tabelë i jep mundësinë administratorit t'i caktojë përdoruesit të zgjedhur (duke klikuar butonin ) ndonjë shërbim ekzistues me një fushë “pozicioni“ (opsional) që përshkruan pozicionin e përdoruesit në shërbim.

Fshirja e linkut midis përdoruesit dhe shërbimit mundësohet gjithashtu duke klikuar butonin  .



7 TEKNOLOGJIA

Moduli Hyrës i RTSHN-së (MHP) është një aplikim i bazuar në rrjet i zhvilluar në gjuhën e programimit Java. Si i tillë, ai mund të përfshihet në pothuajse çdo sistem operues dhe shërbim të serverit të rrjetit. Shembull aktual i MHP-së është instaluar në Tomcat.

Për më tepër, MHP menaxhon të dhënat e tij duke përdorur instrumentin e projektimit relacional të objektit të pavarur të bazës të të dhënave, Hibernate. Aktualisht, MHP përdor MySql si bazë kryesore të të dhënave.

8 ZGJIDHJE E PROBLEMEVE

Sa më poshtë janë këshilla të përgjithshme që mund të ndihmojnë përdoruesit të shmangin probleme të zakonshme në përdorimin e aplikimeve të bazuara në rrjet. Rekomandohet që ato të merren parasysh përpara përdorimit të sistemit dhe/ose raportimit të ndonjë defekti të mundshëm administratorit.

- Nuk rekomandohet përdorimi i funksionimit “të prapëm” (për shembull, duke klikuar butonin e prapëm) të brauserit të rrjetit. Nëse nevojitet faqja e shikuar më parë, përdorimi i të ashtuquajturit “breadcrumb trail” në pjesën e sipërme të majtë të faqes, duhet të jetë i mjaftueshëm.
- Në rast se përdoruesi nuk përdor në mënyrë aktive aplikimin për pak kohë pas regjistrimit, sistemi do të përfundojë sesionin e tij/të saj që mund të çojë në surpriza të pakëndshme pasi përfundimi i sesionit nënkupton gjithashtu fshirjen e të gjitha të dhënave të paruajtura. Përfundimi i sesionit nënkupton gjithashtu se përdoruesi duhet të regjistrohet sërish, me qëllim që të përdorë aplikimin.
- Mos klikoni dy herë në hiperlinqe. Në fakt, mos klikoni gjatë progresit të kërkesës të klikimit të fundit. Në rast se aplikimi nuk reagon menjëherë (për shkak të mbingarkesës së sistemit ose lidhjes së ngadaltë të rrjetit), brauseri normalisht tregon se kërkesa që është bërë është ende në progres. Klikimi dy herë në linkun e dëshiruar natyrisht që nuk do të ndihmojë. Ndodh edhe më keq, nëse një link që klikohet sjell ndryshime në të dhënat në sistem, klikimi dy herë mund të paraqesë gabime në të dhëna.
- Është gjithmonë praktikë e mirë mbyllja e të gjithë brauserave dhe ripërpjekja përpara raportimit të ndonjë lloj gabimi të lidhur me përdorimin e aplikimit.
- Mos krijoni disa sesione përdoruesish me të njëjtin brauser (tip) në të njëjtën makineri. Edhe nëse janë hapur disa dritare të brauserit, secila me sesionin e përdoruesit të saj në aplikim, nuk garantohet që disa brausera do të respektojnë ndarjen e këtyre sesioneve. Me fjalë të tjera, të dhënat nga një sesion mund të shfaqen në një tjetër dhe anasjelltas. Megjithatë, regjistrimi dy herë me një brauser tjetër nuk duhet të krijojë probleme.
- Shmangni regjistrimin e adresave të “faqeve të detajeve” të aplikimit. Regjistrimi i adresave të aplikimit duhet të bëhet me faqen hyrëse ose ndonjë faqe tjetër të painformuar për kontekstin. Nuk rekomandohet regjistrimi i adresave të faqeve ku shfaqen detajet e shërbimit ose raportit të të dhënave. Hapja e aplikimit të këtij lloji regjistrimi adrese do të çojë në faqe me përmbajtje të munguar dhe mund të jetë çorientuese.

ANNEX 7

LISTS OF PARTICIPANTS

1. Trainings and surveys

General

Nr	Year	Date from to	Sector	N participants	Location
1	2011	30.06 - 04.07.2011	Biodiversity	4	Shkodra, Vermosh
2	2011	16 - 21.09.2011	Biodiversity	10	Dajti Mountain, Rrotull, Lezha
10	2013	17 - 21.04.2013	Biodiversity	10	Vlora, Narta, Karaburun, Llogara, Saranda, Butrint, Syri I Kalter
20	2013	17- 19.01.2013	Biodiversity	6	Vlora, Narta
23	2013	09 - 13.06.2013	Biodiversity	11	Kukes, Lura lakes
6	2011	17 - 19.10.2011	Groundwater	5	Lushnje
17	2012	08 - 09.10.2012	Groundwater	4	Shkodra, Lushnje
15	2012	24 - 26.09.2012	Water	9	Pogradec, Prespa Lake
9	2013	16 - 20.04.2013	Water & Groundwater	9	Shkodra, Elbasan, Lushnje, Vlora, Saranda
22	2013	25 - 27.04.2013	Integrated	21	Vlora bay, Orikum, Karaburun, Narta
4	2011	19 - 20.10.2011	Soil	7	Dajti Mountain
12	2012	14 - 18.05.2012	Soil	12	Permet, Carshove, Saranda, Butrint, Ksamil, Himara

Nr	Year	Date from to	Sector	N participants	Location
3	2011	23.09.2011	AQ	2	Korca
5	2011	05 - 11.10.2011	AQ	3	Korca
7	2011	21 - 24.11.2011	AQ	4	Durres, Shkodra, Vlora, Korca
8	2012	14 - 15.02.2012	AQ	3	Durres, Shkodra, Vlora, Korca
11	2012	14 - 16.05.2012	AQ	4	Korca, Durres, Vlora, Shkodra
13	2012	06,09 - 11/07.2012	AQ	3	Shkoder, Elbasan, Durres, Korca, Vlora
14	2012	07,10 - 11/09.2012	AQ	3	Durres, Shkoder, Vlora, Korca
18	2012	19 - 22.11.2012	AQ	4	Vlora, Korca, Elbasan, Shkodra, Durres
19	2013	11,14 - 15.01.2013	AQ	4	Durres, Shkodra, Korca, Vlora
21	2013	08,11 - 12/03.2013	AQ	4	Durres, Shkodra, Korca, Vlora

24	January - February 2012	AQ survey (DT)	Whole country
25	Jul-12	AQ survey (DT)	Whole country
26	May-June 2013	AQ survey (DT)	Whole country

List of participants per field trip/survey

	Field trip n°	Sector	Participants
1	1	Biodiversity	Andrea Grill - Key expert CEMSA
2	1	Biodiversity	Ferdinand Bego - FNS
3	1	Biodiversity	Gunnar Pritzl - CEMSA TL
4	1	Biodiversity	Lefter Kashta - FNS
5	2	Biodiversity	Andrea Grill – Key expert Biodiversity CEMSA
6	2	Biodiversity	Bledar Pepa – Student FNS
7	2	Biodiversity	Denik Ulqini – Student FNS
8	2	Biodiversity	Dorina Topoviti – Student FNS
9	2	Biodiversity	Drita Grishaj - NEA
10	2	Biodiversity	Enerit Sacdanaku – Student FNS
11	2	Biodiversity	Eriola Keci – Student FNS
12	2	Biodiversity	Ferdinand Bego - FNS
13	2	Biodiversity	Kliti Starja – NEA
14	2	Biodiversity	Lefter Kashta - FNS
15	3	AQ	Agron Deliu - IPH
16	3	AQ	Giystina Fusha - NEA
17	3	AQ	Joachim Seewoester – Key expert CEMSA
18	4	Soil	Albert Kopali - Agriculture Faculty
19	4	Soil	Behar Hate - NEA
20	4	Soil	Eljan Kasa - Agriculture Faculty
21	4	Soil	Fatbardh Sallaku - Agriculture Faculty
22	4	Soil	Gjergji Treska - NEA
23	4	Soil	Iilir Kristo – Agriculture Faculty
24	4	Soil	Xhevdet Haxhiaj - Agriculture Faculty
25	5	AQ	Agron Deliu - IPH
26	5	AQ	Giystina Fusha - NEA
27	5	AQ	Joachim Seewoester – Key expert CEMSA
28	6	Groundwater	Bruilda Brushulli - AGS
29	6	Groundwater	Aranit Gelaj - AGS
30	6	Groundwater	Arben Pambuku – AGS
31	6	Groundwater	Bernardas Paukstys – expert CEMSA
32	6	Groundwater	Ferdi Brahushi - Faculty Agriculture
33	7	AQ	Agron Deliu - IPH

34	7	AQ	Gjergji Sino - IPH
35	7	AQ	Gjystina Fusha - NEA
36	7	AQ	Joachim Seewoester – Key expert CEMSA
37	8	AQ	Agron Deliu - IPH
38	8	AQ	Gjystina Fusha - NEA
39	8	AQ	Ilir Dume - IPH
40	8	AQ	Joachim Seewoester – Key expert CEMSA
41	9	Water & Groundwater	Adrian Dhimitri - AGS
42	9	Water & Groundwater	Aranit Gelaj - AGS
43	9	Water & Groundwater	Arben Pambuku – AGS
44	9	Water & Groundwater	Bernardas Paukstys – expert CEMSA
45	9	Water & Groundwater	Brunilda Brushulli - AGS
46	9	Water & Groundwater	Emirjeta Adhami – Expert CEMSA
47	9	Water & Groundwater	Kliti Starja - NEA
48	9	Water & Groundwater	Loreta Sulovari -NEA
49	9	Water & Groundwater	Megli Bele - AGS
50	9	Water & Groundwater	Michael Flanagan – Key expert CEMSA
51	10	Biodiversity	Aleko Miho - FNS
52	10	Biodiversity	Andrea Grill – Key expert CEMSA
53	10	Biodiversity	Arben Gazheli – DTL CEMSA
54	10	Biodiversity	Bledar Pepa – Student FNS
55	10	Biodiversity	Denik Ulqini - FNS
56	10	Biodiversity	Dorina Topoviti - FNS
57	10	Biodiversity	Etleva Canaj – Director NEA
58	10	Biodiversity	Ferdinand Bego - FNS
59	10	Biodiversity	Hektor Xhumara - NEA
60	10	Biodiversity	Lulzim Shuka - FNS
61	11	AQ	Agron Deliu – IPH
62	11	AQ	Gjergji Sino – IPH
63	11	AQ	Gjystina Fusha – NEA
64	11	AQ	Joachim Seewoester – Key expert CEMSA
65	12	Soil	Agelda Ajazi – Student Agriculture Faculty
66	12	Soil	Alexandra Freudenschuss – Expert CEMSA
67	12	Soil	Behar Hate – NEA
68	12	Soil	Fatbardh Sallaku - Agriculture Faculty
69	12	Soil	Ferdi Brahushi - Agriculture Faculty
70	12	Soil	Gjergji Treska – NEA
71	12	Soil	Ilir Ksristo - Agriculture Faculty
72	12	Soil	Irma Duka – Student Agriculture Faculty
73	12	Soil	Ivo Offenthaler – Expert CEMSA
74	12	Soil	Seit Shallari - Agriculture Faculty
75	12	Soil	Zamir Hereni - Agriculture Faculty
76	12	Soil	Zamira Dan - Agriculture Faculty
77	13	AQ	Genc Kurshumi – IPH
78	13	AQ	Gjergji Sino – IPH
79	13	AQ	Gjergji Sino – IPH

80	13	AQ	Gjystina Fusha – NEA
81	13	AQ	Joachim Seewoester – Key expert CEMSA
82	13	AQ	Joachim Seewoester – Key expert CEMSA
83	15	Water	Alma Shehu – AGS
84	15	Water	Aranit Gelaj – AGS
85	15	Water	Arben pambuku – AGS
86	15	Water	Ardian Dhimitri – AGS
87	15	Water	Emirjeta Adhami – expert CEMSA
88	15	Water	Erjol Meco – AGS
89	15	Water	Lida pjeshkazini – FNS
90	15	Water	Michael Flanagan – key expert CEMSA
91	15	Water	Olsi Nika – FNS
92	16	Soil	Agelda Hjari – student Agriculture University
93	16	Soil	Alexandra Freudenschuss – expert CEMSA
94	16	Soil	Behar Hate – NEA
95	16	Soil	Fatbardh Sallaku – Agriculture University
96	16	Soil	Ilir Kristo – Agriculture University
97	16	Soil	Irena Duka – student Agriculture University
98	16	Soil	Isa Balliu – Agriculture University
99	16	Soil	Ivo Offenthaler – expert CEMSA
100	16	Soil	Kliti Starja – NEA
101	16	Soil	Odeta Tota – Agriculture University
102	16	Soil	Seit Shallari – Agriculture University
103	16	Soil	Zamira Dana – Agriculture University
104	17	Groundwater	Aranit Gelaj – AGS
105	17	Groundwater	Arben Pambuku – AGS
106	17	Groundwater	Bernardas Paukstys – expert CEMSA
107	17	Groundwater	Enkelejda Grazhdeni – AGS
108	18	AQ	Genc Kurshumi - IPH
109	18	AQ	Gjergji Sino – IPH
110	18	AQ	Gjystina Fusha – NEA
111	18	AQ	Joachim Seewoester – Key expert CEMSA
112	19	AQ	Ernisa Ceka – NEA
113	19	AQ	Genc Kurshumi – IPH
114	19	AQ	Gjergji Sino – IPH
115	19	AQ	Joachim Seewoester – Key expert CEMSA
116	20	Biodiversity	Arkida Ligaci – CEMSA
117	20	Biodiversity	Denik Ulqini – FNS
118	20	Biodiversity	Drita Grishaj – NEA
119	20	Biodiversity	Ferdinand Bego – FNS
120	20	Biodiversity	Hektor Xhumara – NEA
121	20	Biodiversity	Ina Nasto – FNS
122	20	Biodiversity	Kliti Starja – NEA
123	20	Biodiversity	Philipp Theou – junior expert CEMSA
124	21	AQ	Gjystina Fusha – NEA
125	21	AQ	Joachim Seewoester – key expert CEMSA

126	21	AQ	Shkelzen Shehu – NEA
127	22	Integrated	Agron Deliu – IPH
128	22	Integrated	Aleko Miho – FNS
129	22	Integrated	Andrea Grill – key expert CEMSA
130	22	Integrated	Antoine Avignon - EUD
131	22	Integrated	Aranit Gelaj – AGS
132	22	Integrated	Arben Gazheli – DTL CEMSA
133	22	Integrated	Arben Pambuku – AGS
134	22	Integrated	Arkida Ligaci – coordinator of CEMSA
135	22	Integrated	Behar Hate – NEA
136	22	Integrated	Drita Grishaj – NEA
137	22	Integrated	Elgin Leci – NEA
138	22	Integrated	Elisabeta Murcaj – NEA
139	22	Integrated	Ernisa Caka – NEA
140	22	Integrated	Ferdinand Bego – FNS
141	22	Integrated	Figali Hila – NEA
142	22	Integrated	Gjergji Sino – IPH
143	22	Integrated	Gjystina Fusha – NEA
144	22	Integrated	Kliti Starja – NEA
145	22	Integrated	Lefter Kashta – FNS
146	22	Integrated	Michel Houssiau – TL CEMSA
147	22	Integrated	Odeta Tota - Agriculture Fuculty
148	22	Integrated	Olsi Nika – FNS
149	22	Integrated	Philippe Theou – junior expert CEMSA
150	22	Integrated	Zamira Dana – Agriculture Fuculty
151	23	Biodiversity	Arben Gazheli – DTL CEMSA
152	23	Biodiversity	Bekim Trezhnjeva - FNS
153	23	Biodiversity	Erald Kalemi - FNS
154	23	Biodiversity	Ervis Loçe - FNS
155	23	Biodiversity	Kristi Lakrori - FNS
156	23	Biodiversity	Lulezim Shuka – Expert CEMSA
157	23	Biodiversity	Marjol Meço - FNS
158	23	Biodiversity	Michael Flanagan – Expert CEMSA
159	23	Biodiversity	Ndue Marku - FNS
160	23	Biodiversity	Olsi Nika - FNS
161	23	Biodiversity	Philippe Theou – Junior expert CEMSA

List of participants by NRC

Sector	Participants
Water	Alma Shehu – AGS
Water	Aranit Gelaj – AGS
Groundwater	Arben Pambuku – AGS
Water	Ardian Dhimitri – AGS
Water &	Brunilda Brushulli - AGS

Groundwater	
Groundwater	Enkelejda Grazhdeni – AGS
Water	Erjol Meco – AGS
Water & Groundwater	Megli Bele - AGS
Biodiversity	Bekim Trezhnjeva - FNS
Biodiversity	Bledar Pepa – FNS
Biodiversity	Denik Ulqini – FNS
Biodiversity	Dorina Topoviti - FNS
Biodiversity	Enerit Sacdanaku – FNS
Biodiversity	Erald Kalemi - FNS
Biodiversity	Eriola Keci – FNS
Biodiversity	Ervis Loçe - FNS
Biodiversity	Ferdinand Bego – FNS
Biodiversity	Ina Nasto – FNS
Biodiversity	Kristi Lakrori - FNS
Integrated	Lefter Kashta – FNS
Water	Lida Pjeshkazini – FNS
Biodiversity	Lulzim Shuka - FNS
Biodiversity	Marjol Meço - FNS
Biodiversity	Ndue Marku - FNS
Water	Olsi Nika – FNS
AQ	Agron Deliu - IPH
AQ	Genc Kurshumi – IPH
AQ	Gjergji Sino – IPH
AQ	Ilir Dume - IPH
Soil	Behar Hate – NEA
Biodiversity	Drita Grishaj – NEA
Integrated	Elgin Leci – NEA
Integrated	Elisabeta Murcaj – NEA
Biodiversity	Etleva Canaj – NEA
Integrated	Figali Hila – NEA
AQ	Giystina Fusha - NEA
Soil	Gjergji Treska – NEA
AQ	Gjystina Fusha – NEA
Biodiversity	Hektor Xhumara – NEA
Biodiversity	Kliti Starja – NEA
Water & Groundwater	Loreta Sulovari -NEA
AQ	Shkelzen Shehu – NEA
AQ	Ernisa Ceka – NEA
Soil	Ferdi Brahushi - Agriculture University
Soil	Iilir Kristo – Agriculture University
Soil	Irma Duka – Agriculture University
Soil	Xhevdet Haxhiaj - Agriculture University
Soil	Eljan Kasa - Agriculture University

Soil	Fatbardh Sallaku – Agriculture University
Soil	Ilir Kristo – Agriculture University
Soil	Isa Balliu – Agriculture University
Soil	Odeta Tota – Agriculture University
Soil	Seit Shallari – Agriculture University
Soil	Zamira Dana – Agriculture University

2. Natura 2000

Topics covered

- History and specificities of the biodiversity in Europe in comparison with other parts of the world; specificity of South East Europe, biodiversity hotspots, lessons learnt from this history for restoration, conservation and management objectives and measures in Europe.
- Origin of the concept of networks of Nature Reserves (or any other legal category of protected areas) and the first networks of protected areas.
- Legislative and socio-economic context and relation with other legal framework and international conventions: water framework directive, nitrate directive,…
- Legal and technical implementation of the network.
- Selection of sites and related databases and templates.
- Designation of the sites and legal protection tools.
- Consultation and communication process during site selection and designation and during the preparation of management plans.
- Management and management plans in relation with national and international databases and reporting requirements. Importance of mapping and GIS tools with correlated relational databases. Monitoring of the sites, the habitats and the species.
- Management and the funding of the management. This chapter will cover not only the structural funding (via subsidies) but also the approach by sustainable development and land use. Developed on the base of the history of the vegetation and the French concept of “produits du terroir”: great local products; low input farming; visitors payback; structural funds; agri environmental schemes.

List of participants in Workshops

Workshops/Seminars	Participants
NATURA 2000 first	Ferdinand Bego - FNS
NATURA 2000 first	Lefter Kashta- FNS
NATURA 2000 first	Jani Markaj - FNS
NATURA 2000 first	Skerdilajd Xhulaj - FNS
NATURA 2000 first	Lulzim Shuka - FNS
NATURA 2000 first	Blerina Vrenozi - FNS
NATURA 2000 first	Dorina Topoviti - FNS
NATURA 2000 first	Students - FNS
NATURA 2000 first	Alisa Peci - Ekolevizja
NATURA 2000 first	Albana Zotaj - AKPT
NATURA 2000 first	Drita Grishaj - NEA
NATURA 2000 first	Hektor Xhomora - NEA
NATURA 2000 first	Kliti Starja - NEA
NATURA 2000 first	Xhystina Fusha - NEA
NATURA 2000 first	Enkelejda Shkurta - NEA
NATURA 2000 first	Marash Rakaj – University of Shkodra
NATURA 2000 first	Denik Ulqini – University of Shkodra
NATURA 2000 second	Ermelinda Mahmutaj – EDEN Center
NATURA 2000 second	Albana Bregaj – EDEN Center
NATURA 2000 second	Silvina Kalmns - UNDP
NATURA 2000 second	Violeta Zuna - UNDP
NATURA 2000 second	Kliti Starja - NEA
NATURA 2000 second	Drita Grishaj - NEA
NATURA 2000 second	Hektor Xhomora - NEA
NATURA 2000 second	Blerina Vrenozi - FNS
NATURA 2000 second	Dorina Topoviti - FNS
NATURA 2000 second	Aleko Miho - FNS
NATURA 2000 second	Lefter Kashta - FNS
NATURA 2000 second	Jani markaj - FNS
NATURA 2000 second	Skerdilajd Xhulaj - FNS
NATURA 2000 second	Lulezim Shuka - FNS
NATURA 2000 second	Ferdinand Bego - FNS
NATURA 2000 second	Silvamina Alshabani – MoEFWA
NATURA 2000 second	Arjana Sinoimeri - MoEFWA
NATURA 2000 second	Marash Rakaj – University of Shkodra
NATURA 2000 second	Albana Zotaj - AKPT
NATURA 2000 second	Alisa Peci - Ekolevizja

3. PRTR

List of participants in Workshops

Workshops/Seminars	Participants
PRTR Workshop first	Laureta Dibra - MoEFWA
PRTR Workshop first	Jonila Haxhillari - MoEFWA
PRTR Workshop first	Shpat Braho - NEA
PRTR Workshop first	Sokol Bezhani - NEA
PRTR Workshop first	File Proko - NEA
PRTR Workshop first	Enkelejda Shkurta - NEA
PRTR Workshop first	Romina Koto - NEA
PRTR Workshop first	Gjystina Fusha - NEA
PRTR Workshop first	Odeta Zheku – Climate Change Project
PRTR Workshop first	Besim Islami - CCP
PRTR Workshop first	Dhurata Koraj - FNS
PRTR Workshop second	Ylli Riska – Ferrochromium Factory Elbasan
PRTR Workshop second	Denisa Demi – FK Cement Factory
PRTR Workshop second	Mikela Mele – FK Cement Factory
PRTR Workshop second	Haxhihasan Saraci – Kurum International
PRTR Workshop second	Kliti Starja - NEA
PRTR Workshop second	Enkeleda Shkurta - NEA
PRTR Workshop second	Gjystina Fusha - NEA
PRTR Workshop second	Aida Smaci – Milis Sh.p.k Brick Factory Lezha
PRTR Workshop second	Adela Bace – DAST Sha
PRTR Workshop second	Stela Pepa – ANTEA Cement Sh.a
PRTR Workshop second	Julinda Myrtaj - ANTEA Cement Sh.a
PRTR Workshop second	Edlina Nasi - ANTEA Cement Sh.a
PRTR Workshop second	Armando Dika – Aconsultant shpk
PRTR Workshop second	Oliverta Dika – Aconsultant shpk
PRTR Workshop third	Stela Pela – ANTEA Cement Factory
PRTR Workshop third	Esmeralda Erceku – Municipality of Tirana
PRTR Workshop third	Oliverta Dika – Aconsultant Shpk
PRTR Workshop third	Armando Dika - Aconsultant Shpk
PRTR Workshop third	Ylli Riska – Ferrochromium Factory Elbasan
PRTR Workshop third	Aida Smaci – Milis Brick Factory
PRTR Workshop third	Mikela Mele – FK Cement Factory
PRTR Workshop third	Denisa Demi - FK Cement Factory
PRTR Workshop third	Adela Bace – DAST SHA
PRTR Workshop third	Esmeralda Xhibro – Andromeda Marine Aquaculture
PRTR Workshop third	Enkeleda Shkurta – NEA
PRTR Workshop third	Aspri Kapo – NEA
PRTR Workshop third	Gjystina Fusha – NEA
PRTR Workshop third	Romina Kotot – NEA

ANNEX 8

PRTR PRESENTATIONS

Consolidation of the Environmental Monitoring System in Albania (CEMSA)

PRTR Entry Module

2nd April 2013

Presenter: Edin Bajrović

I. Background Information E-PRTR

E-PRTR

- The European Pollutant Release and Transfer Register (E-PRTR)
- Europe-wide register (not only EU)
- provides easily accessible key environmental data from industrial facilities in European Union Member States and additional countries.

Consolidation of he Environmental Monitoring System in Albania (CEMSA)
An EU-funded project managed by the Delegation of the European Commission to Albania

I. Background Information E-PRTR (2)

- Reports contain information about amounts of pollutant releases to:
  - Air
  - Water
  - Land
  - off-site transfers of waste and of pollutants in waste water
- **91 key pollutants** including heavy metals, pesticides, greenhouse gases and dioxins.
- Limited availability of releases from diffuse sources

Consolidation of he Environmental Monitoring System in Albania (CEMSA)
An EU-funded project managed by the Delegation of the European Commission to Albania

I. Background Information E-PRTR (3)

- Contributes to transparency and public participation in environmental decision-making (Public sites available)

- Reports are uploaded to the Central Data Repository (CDR) of the EEA Reportnet/Eionet site: http://www.eionet.europa.eu/

Consolidation of he Environmental Monitoring System in Albania (CEMSA)
An EU-funded project managed by the Delegation of the European Commission to Albania

I. Background Information
PEM - PRTR Entry Module

Ministry of Environment, Forestry and Water Administration

PEM = **P**RTR **E**ntry **M**odule (PRTR web site)

Objectives:

- E-PRTR information gathering within Albanian facilities
- automatic generation of XML representation of data reports *acceptable by CDR*
- Support internal realistic scenario (document flow)

II. PRTR Entry Module
Facility Reports - Content

Ministry of Environment, Forestry and Water Administration

10 sections to define each PEM facility report:

- General information (reporting year, river basin district code, product name etc.)
- Activities
- Inspections
- Resource consumptions
- Energy consumptions
- Releases to air
- Releases to water
- Releases to land
- Waste water transfers
- Waste transfers

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II. PRTR Entry Module
Introduction

Ministry of Environment, Forestry and Water Administration

- Web application (web site)
- Manage information for:
  - **Facility reports**: all relevant environmental data for <u>one facility</u> for <u>one year</u>
  - Facilities
  - Companies that correspond to facilities
  - Users of the system and their corresponding roles
- Guidelines:
  http://www.eionet.europa.eu/schemas/eprtr/EPRTRUserManual.pdf

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II. PRTR Entry Module
Facility Reports – Data flow

Ministry of Environment, Forestry and Water Administration

PEM facility report states:

- draft
- validated
- submitted to ministry

Industries

- approved by ministry
- ready for EU submission
- submitted to EU

Ministry

- All state changes are preserved in facility history (accessible)

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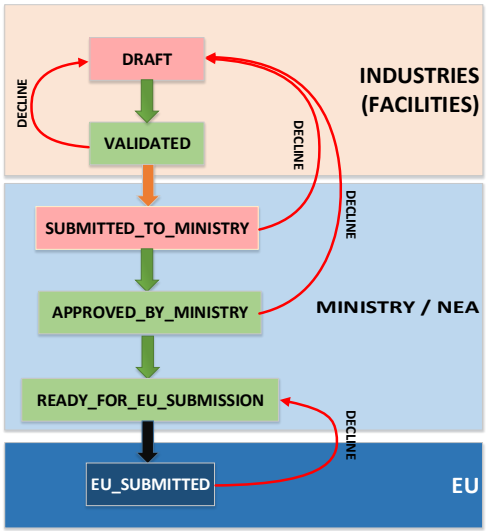
II. PRTR Entry Module
Facility Reports – Data flow diagram

Facility report state change data flow diagram (next page)

II. PRTR Entry Module
Users and roles

- PEM user is provided with a username and password
- Role = set of permissions within a system
- Only *active* PEM users with at least one *role* can enter the system
- Several „roles“ can be assigned to each PEM user
- Based on roles, system dynamically determines which actions are allowed to be taken by the user at given moment

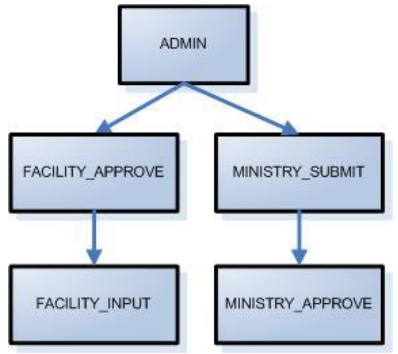


II. PRTR Entry Module
Users and roles (2)

- PRTR Entry Module (PEM) users can be classified into 3 categories:
  - Facility users
  - Ministry users
  - Administrators

II. PRTR Entry Module
Users and roles (3)

PEM roles are hierarchical: include permissions of lower-level roles



II. PRTR Entry Module
Users and roles (4): Facility Users

Facility users

- responsible for the creation of the annual facility report
- data entry of annual facility report information
- submitting of facility reports for further review and handling by the ministry

II. PRTR Entry Module
Users and roles (7): Facility Users

- FACILITY_INPUT. Users are allowed to:
  - Change the facility information (address, permits etc.)
  - Create new facility report
  - Enter the facility report data
  - Change the state of facility report into „VALIDATED“ and back to its initial state „DRAFT“
  - Generate PDF reports
  - Delete facility report if its current state is set to „DRAFT“.
- FACILITY_APPROVE. Users are allowed to:
  - **FACILITY_INPUT permissions +**
  - Change the status of the facility report from “VALIDATED” to „SUBMITTED_TO_MINISTRY“.
  - Change the status of the facility report into its initial state „DRAFT“.

  (Execute all actions under identical conditions as FACILITY_INPUT)

II. PRTR Entry Module
Users and roles (8): Ministry Users

Ministry users

- responsible for handling of annual facility reports, once they are submitted by facilities
- create the XML representation of a report
- send the generated XML to the European PRTR offices

II. PRTR Entry Module
Users and roles (9): Ministry Users

Ministry of Environment, Forestry and Water Administration

- MINISTRY_APPROVE. Users are allowed to:
  - Change the state of facility report from „SUBMITTED_TO_MINISTRY“ to „APPROVED_BY_MINISTRY“
  - Change the state of the facility report into its initial state „DRAFT“
  - Generate PDF reports

- MINISTRY_SUBMIT. Users are allowed to:
  - **MINISTRY_APPROVE permissions +**
  - Change the state of facility report from „APPROVED_BY_MINISTRY“ to „READY_FOR_EU_SUBMISSION“
  - Change the state of facility report from „READY_FOR_EU_SUBMISSION“ to „EU_SUBMITTED“
  - Generate the annual EU compliant XML for facility reports with status „READY_FOR_EU_SUBMISSION“.

  (Execute all actions under identical conditions as MINISTRY_APPROVE)

II. PRTR Entry Module
Users and roles (10): Administrators

Ministry of Environment, Forestry and Water Administration

Administrators

- Creating, editing and deleting of PEM companies
- Creating, editing and deleting of PEM facilities and relation to corresponding companies
- Creating, editing and deleting of PEM users
- Management of user roles and their relation to their facilities

  +
- Can execute Ministry roles (approve, submit reports to EU)

II. PRTR Entry Module
Users and roles (11): Administrators

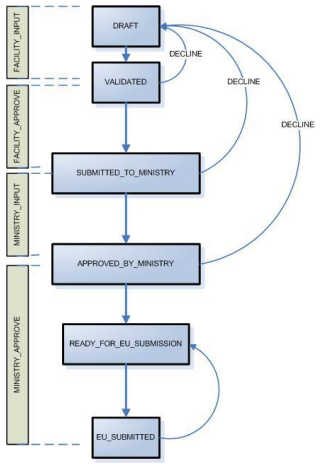
Ministry of Environment, Forestry and Water Administration

Administrators (cont.)

- *all possible actions* in PEM can be executed by the administrator
- their actions can have severe implications!!!
- Ministry needs to carefully choose the responsible person

II. PRTR Entry Module
Users and roles (12): PEM Roles diagram

Ministry of Environment, Forestry and Water Administration



II. PRTR Entry Module Summary

- *Facilities, companies and users are created by administrator(s)*
- *Annual reports for facilities = 1 report per 1 facility per 1 year*
- Permissions for users defined by roles (provided by administrators).
- Different roles for:
  - Industries (FACILITY_INPUT and FACILITY_APPROVE)
  - Ministry (MINISTRY_APPROVE and MINISTRY_SUBMIT)
- Multiple users can work on the same report (vertically and horizontally)
- Facility report status history is preserved

III. PEM interface System Requiremens (2)

System Requirements (Server)

- IT technologies used for deployment:
  - Linux Operation System
  - Java
  - Apache Tomcat web server
- All system software is free – no licensing is required
- Can be installed on Windows OS if required
- Note: The above information is not relevant for users!

III. PEM interface System Requiremens

System Requirements

- *Internet Access*
- Internet browser software (free): Chrome, Firefox, Internet Explorer etc.
- URL will be provided later as domain currently does not exist
- Example: http://prtr.nea.al
- Adobe Acrobat Reader software (free) to open .pdf file format reports

III. PEM interface Functionalities

Web site address

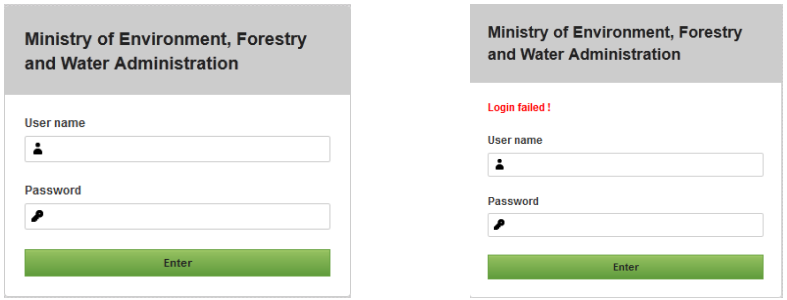
- *Links given for testing are temporary*
- *Test sites will stop working shortly*
- *Permanent server will be provided ("Govnet system")*
- *Permanent links will be provided to users by the Ministry and the Agency when appropriate resources are available (server, DNS)*
- *Web page might also be available via a link from the main web page of the Ministry or the Agency*
- *Test PEM site:* http://prtr.eurobit.ba/pem
- *Test Public site:* http://prtr.eurobit.ba

III. PEM interface Functionalities: Login page

Ministry of Environment, Forestry and Water Administration

Login page

Error

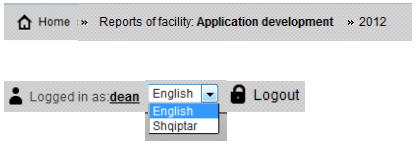


III. PEM interface Functionalities: Home page (header)

Ministry of Environment, Forestry and Water Administration

- Most of the elements of the upper part (header) of the home page are present in all other pages of the application:

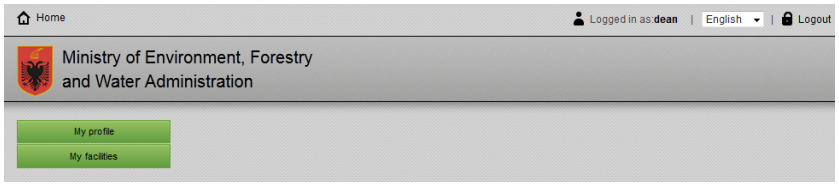
- Home page link
- *Expands to Breadcrumb trail („breadcrumbs“)*
- *Login status*
- *Language selection – additional languages can be easily added*



III. PEM interface Functionalities: Home page

Ministry of Environment, Forestry and Water Administration

- *Appears after a successful login*
- *Can be accessed at any time (Home link)*



III. PEM interface Functionalities: Home page (Ministry)

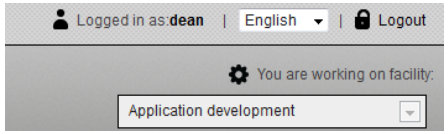
Ministry of Environment, Forestry and Water Administration

- *Notifications inidicating facility reports pending action*

- *Facility Pending actions available:*
  - *SUBMITTED_TO_MINISTRY*
  - *APPROVED_BY_MINISTRY*
  - *READY_FOR_EU_SUBMIT*

III. PEM interface
Functionalities: Home page (Ministry cont.)

- *Link opens Facility Reports page*
- *Indicating current facility report (when working on a report)*



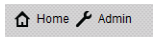
III. PEM interface
Functionalities: Home page (Menus)

- *Menus appear on the left-hand side*

- *Menus are context dependent (dynamically change in different parts of web site):*

III. PEM interface
Functionalities: Home page (Admins)

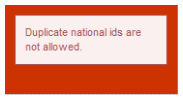
- *Admin link is added next to home button – opens administration module*



III. PEM interface
Functionalities: Notification system

- *Notifications for facility reports pending actions*

- *Notifications for data entry errors or incomplete information*



IV. PEM interface
Facility report entry process

- *Live demonstration*
- *Practical exercises (hands-on) scheduled for tomorrow*
- *Please leave your information for web site access:*
  - *First name*
  - *Last name*
  - *Email*
  - *Telephone number*

IV. Public PRTR web site

- Live demonstration
- More data (facility reports) will be available after practical exercises tomorrow

IV. Public PRTR web site

- *Background PRTR-related information*
- Facility reports data
- Search facility:
  - Facility
  - Pollutants
  - Activity
- Google Maps API

V. Summary

- Two web sites share data, but offer relevant information and options (connected to the same database):
  - PEM: Facility reports data entry and management (Industries and Ministry/Agency)
  - Public site (General population)
- Interface fully bilingual (not data), more languages can be added
- PEM (PRTR Entry Module) web site: Users and roles, data validation, notification system, XML preparation etc.
- Public PRTR site (PRTR background information, facility reports, search, maps)

Example
Release to air
Brick industry

According PRTR, Brick Industry is in the group of facilities which are obliged to report annual air emissions generated due to the production process and other additional activities.

With regard to ANNEX I, Brick industry is under group:

PRTR Activity Code	Description of Activity	Capacity of Activity
3	Productions of non metal minerals products	
3 (g)	Installations for the manufacture of ceramic products by firing, in particular roofing tiles, bricks, refractory bricks, tiles, stoneware or porcelain	With a production capacity of 180.000 tonnes per year (35.000.000.pieces/year

IDENTIFICATION OF EMISSION SOURCES

- It is necessary to identify all sources of pollutants air emissions
- Identification of emission sources at each stage of production process,
- Identification of emission sources from all additional activities related to the production process,
- Identification of emission sources from all additional activities which are not related to the production process, but are within the area of the facility:

IDENTIFICATION OF EMISSION SOURCES

➢Ceramics include the production of bricks and roof tiles, vitrified clay pipes, refractory products, expanded clay products, wall and floor tiles, table and ornamental ware (household ceramics), sanitary ware, technical ceramics, and inorganic bonded abrasives.

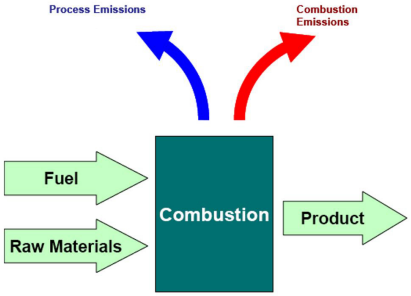
➢Process-related emissions from ceramics result from the calcination of carbonates in the clay, as well as the addition of additives. Similar to the cement and lime production processes, carbonates are heated to high temperatures in a kiln, producing oxides and CO2. Most ceramic products are made from one or more different types of clay (e.g., shales, fire clay and ball clay).

➢The raw materials are collected and finely crushed in successive grinding operations. The ground particles are then fired in a kiln to produce a powder (which may be liquefied). Additives are subsequently added and the ceramic is formed or moulded and 'machined' to smooth rough edges and achieve the desired characteristics of the ceramic. In the case of traditional ceramics, the ceramics are then dried and glazed prior to firing in the kiln. After firing, some ceramics may undergo additional treatment to achieve the final desired quality. CO2 emissions result from the calcination of the raw material (particularly clay, shale, limestone, dolomite and witherite) and the use of limestone as a flux.

IDENTIFICATION OF EMISSION SOURCES

Bricks and tiles manufacture

Formed clay is dried and then fired at high temperature in a kiln; the drying process can be in a separate oven but is often part of the firing kiln.



Production of bricks. Combustion emissions are indicated in red, process emissions are indicated in blue.

DEFINING OF THE POLLUTANTS

It is decided which pollutants will be covered from the List according Appendix 4 – Indicative sector specific sub-list of air pollutants, Guidance Document for the implementation of the European PRTR, European Commission May 2006, in case is agreed not to cover all of them. (In this phase it is sufficient to select the more representative pollutants):

DETERMINATION OF EMISSION (RELEASES TO AIR)

Assessment can be carried out based on:

- **M**easurement,
- **C**alculation,
- **E**stimation

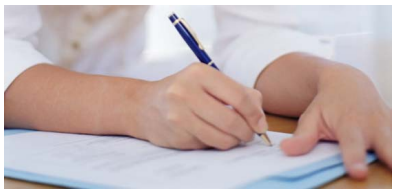
QA/QC

Facility should ensure Quality control of the data on its own validation and verification

FILLING OF THE QUESTIONNAIRE – PRACTICAL EXAMPLE

Filling of the questionnaire mainly covers the following activities:

- Input of general data concerning facility,
- Input of data related to production and additional processes (necessary for determination of emissions)
- Assessment of emissions (based on measurement, calculations and estimations),
- Input of pollutants emission amount values.



DETERMINATION OF EMISSION (RELEASES TO AIR)

Approaching towards assessment of emission amount values undertaken by:

1) Calculations based on data provided by measurements of pollutants air emissions which are undertaken by accredited laboratory,
2) Calculations based on data for the amount and characteristics of fuel used in the production process and other combustion processes, actually data of technology used on combustion (combustion technologies).
3) Calculations based on data for the quantities and characteristics of raw materials, semi-products, final products, and information about production technologies used.

DETERMINATION OF EMISSION (RELEASES TO AIR)

1. Determination of emission values based on data from the provided measurements (1)

Selection of measurement locations and the methodology concerning air emission measurements of separate pollutants from stationary sources is conducted according the following standards: ISO 9096:2008, ISO 10780:2008, ISO 7935:2008, ISO 12039:2008 и ISO 10849:2008:

In accordance with the abovementioned standards, discontinuous measurements of pollutants emission consists of isokinetic sampling which covers:

- Determination of temperature in exhaust gasses [^oC],
- Determination of static and dynamic pressure [kPa],
- Determination of flow velocity [m/s],
- Determination of volume flow, calculated on normal conditions [m^3/h и Nm^3/h],
- Determination of pollutants substances concentration , calculated on normal conditions and depending on oxygen content (CO, SO_2, NO_x) [mg/Nm^3]
- Gravimetric extraction of total suspended particulates (TSP)

DETERMINATION OF EMISSION (RELEASES TO AIR)

1. Determination of emission values based on data from the provided measurements (2)

- Discontinuous measurement is conducted by mobile instruments.
- Proper selection and preparation of the measuring points is of great importance for the accuracy of the results obtained.
- Measurements are performed on a “network” of measuring points in the exhaust gases under the standard ISO 10780:2008, ISO 9096:2008
- During the sampling, samples that will represent the average content of the composition of the gases emitted into the environment, should be ensured.
- Measurements of static pressure (Pst), dynamic pressure (Pdin) and velocity (v) of the exhaust gases is carried out according to the standard ISO 10780:2008.
- The temperature (t) is measured according to the standard ISO 10780:2008.
- Determination of O_2, CO, CO_2, SO_2, NO_x concentration, is according to the methods ISO 7935:2008, ISO 12039:2008 and ISO 10849:2008
- Sampling and determination of the concentration of TSP in the flue gas is according to the standard ISO 9096:2008.

DETERMINATION OF EMISSION (RELEASES TO AIR)

1. Determination of emission values based on data from the provided measurements (3)

In addition it is necessary to consider the following:

✓Type of combustion plant
✓Type of fuel
✓Fuel consumption during the measurement time

It is necessary to calculate emission quantity per hour $E_{emission,h}$ by multiplying the concentration of pollutants (calculated to normal conditions) and volume gas flow (calculated to normal conditions).
Annual emission quantities are calculated by the following equation:

$$E_{emission,year} = E_{emission,h} \bullet h_{year} \quad [kg/year]$$

2. Calculations based on data regarding amount and characteristic of fuel used (combustion technology).

Assessment of annual pollutants emission according this method is expressed by the following equations:

$$E_{emission,\,j} = \Sigma\, A_i \bullet EF_{i,j} \qquad [kg/year]$$

where:

$E_{emission,\,j}$ = emission amount of the pollutant **j** , [kg/year]
A_i = Activity rate – annual consumption of fuel type **i** [GJ],
$EF_{i,j}$ = Emission factor for pollutant **j** and type of fuel **i**,
j = pollutant,
i = type of fuel.

3. Calculations based on data regarding amount and characteristics of materials and production technologies.

Similar to the previous method, in this case annual pollutants emissions are expressed by the following equation:

$$E_{emission,\,j} = \Sigma\, A_{m,\,tehnology} \bullet EF_{j,\,tehnology} \qquad [kg/year]$$

where:

$E_{emission,\,j}$ = emission amount of the pollutant **j** , [kg/year]
$A_{m,\,tehnology}$ = Activity rate – annual amount of material **m** [t],
$EF_{m,j}$ = Emission factor for pollutant **j** and type of material **m** [kg/t]
j = pollutant,
m = type of material (raw material, semi-product, final product) for the relevant production technology.

Emission factors can be provided from IPCC Guidelines for National Greenhouse Gas Inventories 2006 and from EMEP/EEA air pollutant emission inventory Guidebook 2009 depending on whether it is a matter of GHG or Non – GHG.

Total emission value of certain pollutant **j**, on facility level is sum of emission amounts from all sources, whether they are assessed by measurement, calculation or experts judgment. Hence, it means that should be taken in to account all emissions from combustion processes and all emissions resulting from production processes.

$$E_{total\ emission,\,j} = E_{total\ combastiions,\,j} + E_{total\ process,\,j}$$

EXAMPLE:

Concerning Data filled within in the questionnaire concerning the Brick Factory the following data will be used (assumed values):

Raw materials:
clay 60.000 t
limestone 15.000 t
dolomite 3.000 t

Final product (semi product)
bricks and roof tiles 70.000 t

Fuels
residual oil 10.000.. (t/ annually) for drying and heating of bricks and roof tiles

Task:

−To calculate the emissions from residual oil combustions regarding (or natural gas) regarding pre-heating process in rolling mills for the following pollutants: CO2, NOx, CO, NMVOC, SOx, PM10.

CALCULATION OF EMISSION AMOUNT VALUES (RELEASES TO AIR)

1. First step – Determination of Activity Rates regarding residual oil in GJ

1.1. Residual oil combusted –drying and heating of bricks and roof tiles
10.000 [t] ● 40,4 [GJ/Mg] = 404.000 [GJ]

- Net Calorific Values (NCV) are presented in Table 1.2, Volume 2, Energy, page 1.18, IPCC Guidelines for National Greenhouse Gas Inventories 2006.

2. Second step – Calculation of annual emissions

2.1. CO2 – Calculation of CO2 – concerning **residual oil combustion** for drying and heating of the bricks and roof tiles

$E_{CO2 - Res\ oil} = A_{RES\ OIL} \bullet EF_{CO2\ RES\ OIL}$ [kg/year]

$E_{CO2 - K}$ = 404.000 [GJ] ● 77.400 [kg/TJ] = 4.040 [TJ] ● 77,4 [t/TJ] = **31.270,0 [t]**

2.2. CO2 - Calculation regarding **production process**

According Tier 2 methodology, for calculation of CO2 emissions the following equation is used:

$E_{CO2\ Emissions} = (M_L \bullet EF_L) + (M_D \bullet EF_D)$

Where:
CO2 Emissions = emissions of CO2 from other process uses of carbonates, tonnes
M_L or M_D = mass of limestone or dolomite respectively (consumption), tonnes.
EF_L or EF_D = emission factor for limestone or dolomite calcination respectively, tonnes CO2/tonne carbonate

EF_L and EF_D values can be provided from the facility, in case is not available, then provide from Table 2.1, page 2.7 Volume 3, Chapter 2 Mineral Industry, Guidelines for National GHG Inventories 2006.

$CO2_{Emissions}$ = 15.000 [t limestone] • 0,43971 [tCO2/t limestone] + 3.000 [t dolomite] • 0,47732 [tCO2/t dolomite] = 6.595,6 + 1.431,9 = **8027,5 [t]**

Calculation of NOx, CO, NMVOC, SOx, PM10 emissions

2.3. Calculation of NOx, CO, SOx.

The following equation is used:

$E_{emission,\ j} = \Sigma\ AR_{Product} \bullet EF_j$

where:
$E_{emission,\ j}$ = emission value for pollutant j , [t/year]
$AR_{Product}$ = activity rate – annual production of bricks and roof tiles [t],
EF_j = emission factor for pollutant j

Selection of emission factors for: NOx ,CO , SOx is from Table 3.28, page 28, 1.A.2.f.i. Bricks and tiles, 1.A.2 Manufacturing industries and construction, (combustion), 1 Energy, EMEP/ EEA air pollutant emission inventory guidebook 2009. .

Table below presents the pollutants emissions due to the residual oil combustion for drying and heating of bricks and roof tiles.

Activity Rate	Polutants	EF [g/t Product]	Emission [t]
70.000 t bricks and roof tiles	**NOx**	142	**9,94**
	CO	415	**29,05**
	SO_2	166	**11,62**

2.4. For calculations of NMVOC и PM10 emissions, the following equation is used:

$E_{emission,\,j} = \Sigma\, AR_{Res\ Oil} \bullet EF_{Res\ Oil\,,\,j}$
where:
$E_{emission,\,j}$ = emission value for pollutant **j** , [t/year]
$AR_{Res\ Oil}$ = activity rate – annual consumption of Residual Oil [GJ],
$EF_{Res\ Oil\,,\,j}$ = Emission factor for Residual Oil pollutant **j**

Selection of emission factors for: NMVOC , PM10 is from Table 3.4. page 16, 1.A.2 combustion in industry using liquid fuels

The Table presents the emission values of the mentioned pollutants concerning drying and heating of bricks and roof tiles.

Activity Rate	Polutants	EF [g/GJ]	Emission [t]
404.000 [GJ]	**NMVOC**	10 [g/GJ]	4,04
	PM10	21,5 [g/GJ]	8,69

Total emission

Summarize the emissions of the relevant pollutant from all process (fuel combustion and from production process)

For example regarding CO2:
$E_{CO2\ RES\ OIL}$ = 31.269,6 [Mg]
$E_{CO2\,,\,PROCESS}$ = 8.027,5 [Mg]

$E_{CO2\,,\,TOTAL}$ = 39.297,1 [Mg]

Pollutants	Emission [Mg]
CO_2	**39.297,1**
NOx,	**9,94**
CO,	**29,05**
NMVOC,	**4,04**
SOx,	**11,62**
PM10	**8,69**

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CEMSA Project

E-PRTR - Emissions to water and reporting

Presented by: Dr. Michael Flanagan
Key water Quality Monitoring Expert

2nd April 2013

E-PRTR Emissions to water

PRTR Background

Regulation (EC) No. 166/2006 concerning the establishment of a European Pollutant Release and Transfer Register amended Council Directives 91/689/EEC and 96/61/EC (original IPPC was replaced by 2008/1/EC & now 2010/75/EU).

Under E-PRTR the scope has been extended from EPER beyond IPPC activities and waste to cover the following: aquaculture, shipbuilding and maintenance, quarrying and underground mining, opencast mining and urban wastewater treatment plants

E-PRTR Emissions to water

Presentation covers

1. Background to PRTR
2. Benefits of PRTR
3. Sectors that must report & Pollutants
4. Measure, Estimate, Calculate
5. Role of COMMISSION, MSs & CA
6. Reporting Obligations of the Licensed Facility (LF)
7. Common Reporting Errors
8. E-PRTR website
9. The need to develop a National website for PRTR

E-PRTR Emissions to water

PRTR Background

- **The European Pollutant Release and Transfer Register (E-PRTR) is an inventory of pollutant emissions from industry and other sources;**
- **The aim of the inventory is to make information on pollutant emissions and waste transfers more available to the public.** (This helps to increase public awareness on environmental matters, allows a free exchange of views, more effective participation on environmental decision-making and, eventually, leads to a better environment)

E-PRTR Emissions to water

General Benefits of PRTR

The PRTR dataset facilitates the following:

- Public access to information on industrial releases of pollutants and waste transfers;
- Emissions tracking;
- Emissions trends;
- Emissions data for enforcement reports and other reports;
- Demonstration of progress in reducing polluting emissions;
- Establishment of progress on environmental policies, targets and goals

E-PRTR Emissions to water

Benefits (for the Community)

EU and International benefits:

- E-PRTR includes data from 27 EU Member States;
- E-PRTR data reported by >25,000 industrial facilities covering 65 economic activities across Europe;
- PRTR provides transboundary impact data;
- E-PRTR data is displayed on the European PRTR website: http://prtr.ec.europa.eu - screenshot (later);
- PRTR covers 9 industry sectors

E-PRTR Emissions to water

Benefits (for industry)

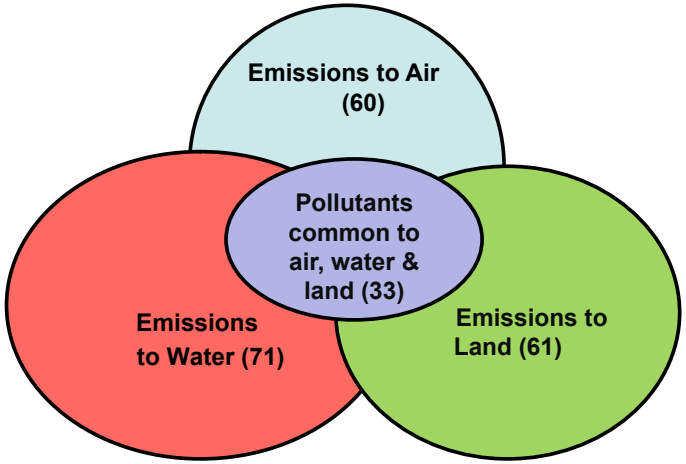
- Provides a Driver for pollution reduction;
- Enables similar industries to benchmark their environmental performance with others in their sector;
- Enables reduction in emissions with financial savings;
- E-PRTR information can encourage industry and business to examine environmental costs, reduce emissions and waste transfers and to adopt cleaner production techniques – e.g. CGPP, etc;
- E-PRTR data can be used in licensing decisions for new plants and facilities

E-PRTR Emissions Reporting

NINE industry sectors

1. energy
2. production and processing of metals
3. mineral industry
4. chemical industry
5. waste and waste water management
6. paper and wood production and processing
7. intensive livestock production and aquaculture
8. animal and vegetable products
9. other activities

EC No. 166/2006 – Annex II - 91 POLLUTANTS



E-PRTR Emissions Reporting

Varying reporting thresholds depend on adverse impact

Thresholds (Annex II):

- To air: 0.0001 kg/yr for dioxins & furans to 100million kg/yr for CO2
- To water: 0.0001 kg/yr for dioxins & furans to 50,000 kg/yr for T.N.
- To land: 0.0001 kg/yr for dioxins & furans to 50,000 kg/yr for T.N.

E-PRTR Emissions Reporting

Reporting Obligations of Licensed Facilities

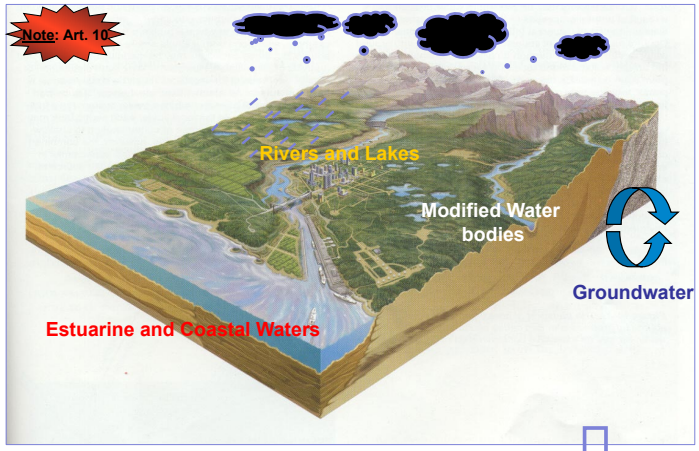
If any of 91 specified pollutants listed in Annex II of Regulation (EC) No. 166/2006 are released from activities in Annex II (of the Regulation), to air, water or land, either as permitted emissions or as accidental releases, or transferred to off-site waste water treatment plants (WWTPs), in excess of the amounts specified in Annex II, then they have to be reported on

E-PRTR emission information sources

the Water Framework Directive (2000/60/EC) & daughter directives: (GWD, 2006/118/EC) and the Priority Substances Directive(s) (2006/11/EC & 2008/105/EC, which establishes ELVs for the priority substances);
the IE Directive (96/61 repealed by 2008/1) (2010/75/EU);
the Nitrates Directive (91/676/EC);
the UWWT Directive (91/271/EEC as amended by 98/15/EC);
the Sewage Sludge Directive (86/278/EEC);
the Freshwater Fish Directive (2006/44/EC);
the D.W. Directive (98/83/EC);
the Bathing Water Directive (2006/7/EC).

Metal	mg/kg DM
Cd	1
Cu	50
Ni	30
Pb	50
Zn	150
Hg	1

E-PRTR emissions to water



EPRTR & wastewaters

(+ 43M m³ mining waste)

Parameter	Typical Before treatment; Units mg/l	Limit After treatment; Units mg/l	Removal Efficiency (%)	Albania estimates T / yr.x1,000
BOD	100-350	25	70 - 90	67.5(p) (not including coastal cities, Vlora,Durres)
COD	Depends on discharges	125	75	-
SS	100-400	35	90	-
T.P	5-25	2 &1$_{>100,000}$	80	1.3(p)+4.9
TN	20-85	15 & 10$_{>100,000}$	70 – 80	9.5(p)+26

E-PRTR emissions to water

FLOW INFORMATION

Flow Statistics

Influent/Effluent Flow (m3/day)
Annual Influent/Effluent Flow
(Storm-water Flow) & Annual Storm-water Flow
Annual Influent Flow to Treatment
Number of INFL/EFFL Flow Measurements (365)
Mean & Median Daily Influent/Effluent Flow
Maximum Daily Flow & Minimum Daily Flow
Maximum Daily Flow/Minimum Daily Flow (ratio)

E-PRTR Emissions Reporting

Common reporting errors

Deployed methods need to specify if the emission loads being reported are based on:
Measurement (M) – i.e. release data based on direct monitoring results which need to be converted to annual mass emissions. Flow data is required for the conversion to annual mass emissions in kg/yr;
Calculation (C) – i.e. release data based on calculations using activity data (fuel use, production rates, etc.) and emission factors or mass balance calculations;
Estimation (E) – i.e. release data based on non-standardised estimations, calculation tools, expert assessment and assumptions

E-PRTR Emissions Reporting

SAMPLE CALCULATIONS

e.g. WW (N) Tirana metropolitan area

ESTIMATE: Without treatment

~ 800,000 pop. X 3.1 kg N p.p. = 2,480,000 kg/yr (PRTR reporting limit 50,000 kg/yr)

ESTIMATE: With treatment : 2,480,000 kg X 0.2 (80% removal) = 496,000 kg/yr

CALCULATE: With treatment (Calculation): 90,000 m3/day (mean discharge volume/day) X 365 (volume/yr) X 1000 (to litres) X 15 (N mg/l limit) ÷ 1,000,000 (to kg) = 492,750 kg/yr

FOR PHOSPHORUS: VALUE ~ 0.43 kg P/p/yr.

E-PRTR Emissions Reporting

IPPC CALCULATION FOR ZINC

Company discharges 1,300 m3 of wastewater per day

= 1,300 X 1,000 litres of wastewater per day = 1,300,000 litres/day

Each 1litre of wastewater has 0.5 mg of Zn

Total discharge of zinc per day = 0.5 X 1,300,000 mg = 650,000 mg Zn

Total discharge of zinc per year = 650,000 X 365 days = 237,250,000 mg Zn/yr

This is 237,250,000 ÷ 1,000,000 = 237.25 kg Zn/yr

E-PRTR from IPPC activity

IPPC Licensed Pharmaceutical Company: Daily flow limit = 1,300 m3				
Parameter (A)	IPPC Limit (mg/l) (B)	Maximum Discharge (C)	License limit Load kg/yr	EPRTR limit kg/yr
BOD	25	1300 m3/day	11863	n/a
SS	35	1300 m3/day	16608	n/a
COD	125	1300 m3/day	59313	n/a
TP	2	1300 m3/day	949	5,000
TN	15	1300 m3/day	7118	50,000
NH3 N	10	1300 m3/day	4745	n/a
Zn	0.5	1300 m3/day	237	n/a
Cu	0.1	1300 m3/day	47	n/a
Zn & cmpnds	0.5	1300 m3/day	237	100
Cu & cmpnds	1.5	1300 m3/day	712	50
Hg & cmpnds	0.03	1300 m3/day	14	1
Cd & cmpnds	0.05	1300 m3/day	24	5
Tl & cmpnds	0.05	1300 m3/day	24	n/a
As & cmpnds	0.15	1300 m3/day	71	5
Pb & cmpnds	0.2	1300 m3/day	95	20
Ni & cmpnds	0.5	1300 m3/day	237	20
Dioxins & Furans	0.3 ng/l	1300 m3/day	0.142	0.0001

E-PRTR Emissions Reporting

Roles of Commission, MSs and Competent Authority under E-PRTR Regulation 166/2006

In order to enhance the usefulness and impact of the European PRTR, the Commission and the Member States should cooperate in developing guidance supporting the implementation of the European PRTR Para. 16

The competent authorities shall assess the quality of the data provided by the operators of the facilities ..... in particular as to their completeness, consistency and credibility Art. 9.1

E-PRTR Emissions Reporting

Reporting Obligations of Licensed Facilities

The operator of each facility shall report annually to its competent authority, along with an indication of whether the information is based on measurement, calculation or estimation, of the following:

- ***Releases to air, water and land of any pollutant specified in Annex II for which the applicable threshold value is exceeded;***
- ***Off-site transfers of hazardous waste (> 2 tonnes/yr or of non-hazardous waste (> 2,000 tonnes/yr);***
- ***Off-site transfers of any pollutant specified in Annex II in waste water destined for wastewater treatment for which the applicable threshold value is exceeded***

Art. 5

E-PRTR Emissions Reporting

Common reporting errors

When reporting Emission to Water or Emission to Sewer common reporting errors include:

- **Incorrect units used e.g. tonnes instead of kg;**
- **Emissions not credible when compared to previous year;**
- **Not all licensed emission points reported on;**
- **Not all relevant PRTR pollutants reported**

(Refer to facility Permit/Licence and to the EU PRTR Guidance Doc - Appendix 3 for indicative PRTR pollutants by Sector)

E-PRTR Emissions Reporting

Reporting Obligations of Licensed Facilities

- **Report annual mass emissions of PRTR pollutants and licensed pollutants in kg/yr;**
- **Report Releases to Air, Water and Wastewater;**
- **Report Methods of determination (M,C,E) and description of methods;**
- **Report relevant Waste Transfers with EWC Codes and R & D Codes in tonnes/yr**

(e.g. D01.01.01=inert landfill waste; R03.02.01=composting)

E-PRTR Emissions Reporting

Common reporting errors

When reporting Emission to Water or Emission to Sewer common reporting errors include:

- **Accidental emissions not reported;**
- **Fugitive emissions not reported;**
- **Reporting does not reflect correct emission type e.g. emission is reported to surface water instead of to wastewater/sewer**

E-PRTR Emissions reporting

Common reporting errors

Deployed methods need to specify if the emission loads being reported are based on:

Correct methods and codes e.g. in next slide;

Precise description of methods used e.g. in next slide

Calculation Methods and Codes

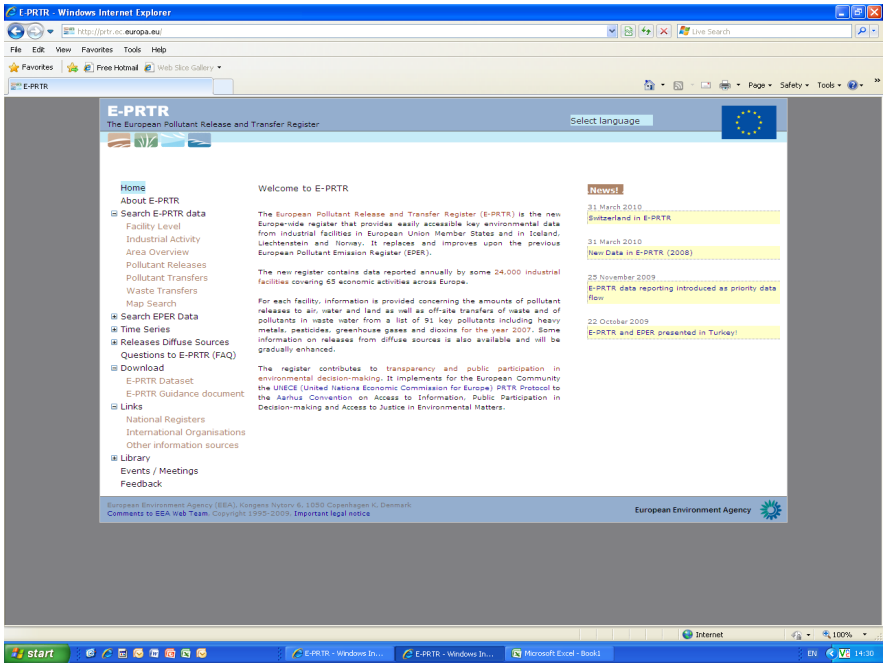
Method Code	When to Use it	Description Field
PER	If the facility's license specifies a specific calculation method to be used	Description of method
ETS	For CO2 emissions and facilities that are part of the ETS (emissions trading system)	Leave Blank
OTH	If not using a standard calculation method e.g. it is based on fuel consumption or a non-standard calculation methodology that has been approved by the EPA E.G. GAS SIM LITE, EPA Emission Calculation Tool etc.	Description of calculation method or name of calculation tool
ISO / EN	Only for approved standard methods as listed in the PRTR EU Guidance (check guidance list)	Leave Blank
NRB	National or Regional binding calculation methodology prescribed by legal act for the pollutant and facility concerned.	Description of Method
MAB	Mass balance method, which is accepted by CA	Description of Method.

E-PRTR Emissions to water

E-PRTR website (& screen shot - next slide)

http://prtr.ec.europa.eu

Consolidation of the Environmental Monitoring System in Albania (CEMSA)
An EU-funded Project managed by the EU Delegation to Albania



E-PRTR Emissions to water

The need to develop a National E-PRTR website

- A National PRTR website needs to be developed to comply with future ratification of the PRTR Protocol by Albania;
- The website should display all Albanian facilities which are covered by PRTR Regulations;
- It should provide details on all facilities where pollutants and waste transfers are above the E-PRTR thresholds;
- It should facilitate public access

THANK YOU FOR YOUR ATTENTION !

Consolidation of the Environmental Monitoring System in Albania (CEMSA)
An EU-funded Project managed by the EU Delegation to Albania

Examples calculation of air emissions regarding E-PRTR

CEMSA Workshop
(2nd - 3th of April 2013, Tirana)

M.Sc. Magdalena Trajkovska Trpevska
Air Emission Expert

2.04.2013

❖General overview and note

Data collection and reporting process

- **Operators of the relevant facility, under Annex 1 of E-PRTR protocol are obliged to report towards the competent authorities, the air emissions generated from the sources of the facility in accordance with all required information.**
  - **ANNEX 1 E-PRTR**
- **Reporting shall be based on the best available information which enables appropriate quality assurance and which is in accordance with internationally approved methodologies where such methodologies are available.**

Data collection and reporting process

- **POLLUTANTS:**

- **Relevant pollutant emissions or expected pollutant emissions generated from facility processes SHALL BE REPORTED.**

APPENDIX 4 E_PRTR

- ✓ Reporting by the operator of a facility will in most cases contain less pollutants than listed in the tables of Appendix 4 or 5.
- ✓ In practice, the Annex II pollutants that are relevant for reporting purposes will be decided for each facility on a case-by-case basis.

Data collection and reporting process

- **POLLUTANTS:**

- **If the sum of releases to air of a pollutant from all Annex I activities at a facility exceeds the corresponding release threshold values for that medium, the release has to be reported**

- **This consideration is not limited to those pollutants that are listed in the facility's permit.**

- **Annex 2 E-PRTR**

Data collection and reporting process

- **Reporting is on annual bases**
- **Data are presented in kg/year**

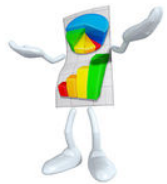
Releases to air					
Pollutant		Method		Quantity	
no. A II[30]	Name[31]	M/C/E[32]	Method used[33]	T (total)[34] (kg/year)	A (accidental)[35] kg/year
1	Methane (CH_4)	C	IPCC	521,000	-
3	Carbon dioxide (CO_2)	M	ISO 12039:2001	413,000,000	-
21	Mercury	M	EN 13211:2001	17.0	2.00

Data collection and reporting process

- The two most common structures in use for collecting the data needed to establish national emissions registers are:
  - **information requirements set out in environmental permits**
  - **essential self-monitoring and reporting**
  - **measurement/Calculation/Estimation**

Reported releases

- **The reported release data must include a reference M, C, E to the determination methodology used for the reported release data.**
- **Measurement -Standard methodologies usually available – CEN & ISO standards**
- **Calculation- Internationally approved calculation methodologies**
- **Estimation- Best assumption, expert judgment**
- **Where data are measured or calculated ("M" or "C"), the method of measurement and/or the method for calculation shall be indicated**



Reported releases

- The operator of the facility has to decide before collecting the data which determination methodology (M, C or E) for a certain pollutant results in "best available information" for the reporting.
- Where data are measured or calculated, the method of measurement and/or the method for calculation shall in addition be indicated.

- APPENDIX 3 E-PRTR

Quality assurance

- Operators are responsible for the quality of the information that they report
- In order to ensure the quality of the data reported facilities may wish to take the information provided in the IPPC monitoring BREF into account
- If a quality assurance system such as ISO 9001 ; or an environmental management system such as EMAS or ISO 14001 or other similar/ analogous national systems is already being used by the facility, the reporting of the E-PRTR data might be included within that system to help to ensure the highest possible quality of the data
- Operators are obliged to use the "best available data" when preparing their reports. In accordance with article 9(2) of the E-PRTR Regulation, data reported by operators should be of high quality in particular as regards its COMPLETENESS, CONSISTENCY

Quality assurance

- COMPLETENESS means that the reported data should cover all releases and off-site transfers of all pollutants and wastes exceeding thresholds for all facilities with Annex I activities above the capacity thresholds. Completeness means also that all additionally required information on the identification of the facility and Annex I activities is fully reported.
- CONSISTENCY means that data shall be reported on the basis of clear and uniform definitions, source identification and reliable methodologies for the determination of releases over several years.
- This will enable comparison of the reported data with previous release data of reporting facilities or with data of similar sources in other countries.

Quality assurance

- CREDIBILITY refers to the authenticity, reliability, comparability and transparency of the data. In the context of pollutant release and transfer registers credibility is closely linked to consistency.
- The competent authorities have the duty to assess the quality of information provided by operators

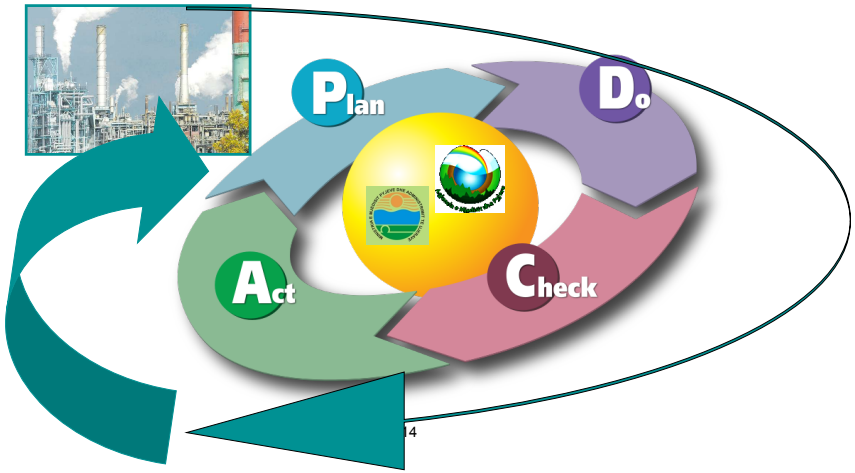
Quality assurance

- **Before submitting the data to the relevant competent authority, the operator should ensure an appropriate quality of the data by ensuring that the information is complete, consistent and credible.**

- **If an operator of a facility has justifiable reasons that specific information concerning releases or off-site transfers should be kept confidential, he has to inform the competent authorities.**

Coordination of quality assurance and quality control

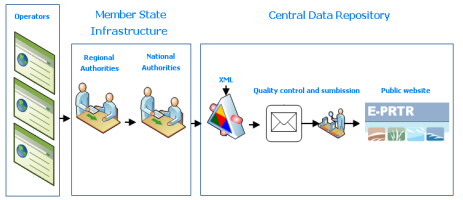
- **Operators are responsible for quality assurance at facility level**



Data collection Forms

- Data of the annual emissions are presented in relevant Forms

- Data collection FORM



Identification of facility

- Table :Explanations related to information required for the identification of the facility

Identification of facility

- **Facility operators may provide optional information on the facility. There is no obligation to report it but the information may be of interest to the public and may also be useful for the competent authority for assessing the quality of the data. Table 3 gives an overview of this optional information according to Annex III to the E-PRTR Regulation:**

Optional information
Production volume
Number of installations
Number of operating hours in year
Number of employees
Text field for textual information[1] or website address delivered by facility or parent company

[1] Textual information should be provided in mother tongue and optionally in English language

Coding of activities

- **Structure for reporting of all Annex I activities of a facility (with examples)**

Annex I activity*	E-PRTR code	IPPC code[1]	Activity name according to Annex I of E-PRTR Regulation (declaration not obligatory)
1**	2.(f)	2.6	Installations for surface treatment of metals and plastic materials using an electrolytic or chemical process where the volume of the treatment vats equals 30 m^3
2	9.(c)	6.7.	Installations for the surface treatment of substances, objects or products using organic solvents, in particular for dressing, printing, coating, degreasing, waterproofing, sizing, painting, cleaning or impregnating with a consumption capacity of 150 kg per hour or 200 tonnes per year
N	...	...	...

* Consecutive no. of Annex I activities
** Activity 1 shall be the main Annex I activity

[1] The IPPC-code consists of a two digit code in accordance with Annex I of the IPPC-Directive

Coding of activities

- **In addition to the information required for the identification of the facility, all Annex I activities carried out at a facility have to be listed according to the coding system given in Annex I and, (if available), the IPPC code .**
- **In accordance with Annex I to the E-PRTR Regulation, the E-PRTR code consists of a number from 1 and 9 and a letter from a to g.**
- **For some activities, there is a further sub-division from (i) to (xi). This sub-division has not to be reported.**

Coding of activities

- Data of the annual emissions are presented in relevant Forms

- Data collection FORM

http://prtr.ec.europa.eu/

Thank you for your attention

Faleminderit

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